



**TÜRK LOYDU**

# 2017

## ANNUAL REPORT



[www.turkloydu.org](http://www.turkloydu.org)



“Greatness is such that you will not compliment to anyone, you will not deceive anyone, you will see the real ideal for the country, and walk towards that target. Everyone will be against you. Everyone will try to divert you from your path. But you will be the one to eliminate such resistance. They will pile numerous difficulties on your path. You will overcome these difficulties by considering yourself not big but small, weak, without means, nothing, and by believing that no help will come from anyone. After that, if they call you great, you will laugh at them.”

**MUSTAFA KEMAL ATATÜRK**

A stylized, handwritten signature in black ink, likely representing Mustafa Kemal Atatürk. The signature is fluid and cursive, with a large, sweeping flourish at the end.

**TÜRK LOYDU**

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FOUNDATION**

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### OUR VISION

To become the most preferred international classification and certification society that is powered by its own rules and knowledge as well as expertise

### OUR MISSION

To provide conformity assessment services in the field of safety of life, property and the environment, in accordance with our principles

### OUR PRINCIPLES

Independence and Impartiality,  
Honesty and Reliability,  
Continuous improvement,  
Generating and Sharing of Knowledge,  
Customer Oriented and Quality Service,  
Employee Appreciation.





## **TÜRK LOYDU FOUNDATION, BOARD OF DIRECTORS**

**Chairman of the Board**  
Cem MELİKOĞLU

**Deputy Chairman of the Board**  
Atilla ÇİFTÇİGÜZELİ

**Treasurer**  
Halim METE

**Member**  
Akif EROĞLU  
Atilla OKSAY  
Ferhat ACUNER  
Gürsel GÜRÇAY  
Gürsel YILDIZ  
Prof. Dr. Hakan AKYILDIZ

**Supervisory Board**  
Ali ÖNDER  
Derya TURGUT  
Ufuk TEKER

## **TÜRK LOYDU CONFORMITY ASSESSMENT CORP, BOARD OF DIRECTORS**

**Chairman of the Board**  
Alper ERALP

**Deputy Chairman of the Board**  
Ayfer ADIGÜZEL

**Member**  
Okan ÇETİN

## **TÜRK LOYDU HEALTH, SAFETY, ENVIRONMENT AND QUALITY POLICY**

### **Türk Loydu undertakes to;**

- Maintain the principles of independence, impartiality, confidentiality and reliability,
- Ensure compliance with the Code of Ethics of Türk Loydu,
- Provide services in accordance with the applicable legislation, rules and standards, including the requirements of customers,
- Contribute to the protection of safety of life, property, and the environment with its rules and services,
- Maintain national and international recognitions in compliance with the Health, Safety, Environment and Quality standards,
- Ensure customer satisfaction by providing services in line with customer expectations in a timely and equal manner,
- Ensure an efficient training and qualification system to maintain a highly qualified staff,
- Manage the risks related to service processes,
- Provide the necessary environmental conditions and resources to prevent injuries and health problems of its employees and to ensure their safety,
- Demand their customers to provide the necessary resources to ensure safe performance of field activities,
- Exercise its power and responsibility not to provide service until the necessary health and safety conditions are met in cases that may endanger the health and safety of its employees,
- Always keep its employees aware of occupational health and safety, and protection of environment,
- Assess and minimize the environmental impacts during operations, and prevent pollution,
- Use resources in a sustainable manner,
- Constantly improve its Health, Safety, Environment and Quality performance by periodically reviewing the key performance indicators and objectives determined for this purpose.





**Cem MELİKOĞLU** Chairman of the Board

Cem Melikoğlu was born in 1964 in Istanbul. After completing his education in the Private German High School of Istanbul, he graduated from Istanbul Technical University, Department of Naval Architecture and Marine Engineering in 1988. He has good command of German and English. He worked as the EMEA representative of ExxonMobil for over 21 years in Health, Safety, Environment and Security areas, then served as a senior executive in OMV Petrol Ofisi Company and TANAP Natural Gas Pipeline Project.

He worked on system installations for collection of waste oils in Petder created by the leading oil companies in our country, served as a member of the board, chaired the OHS Commission in Petder and the Chamber of Naval Architects, and hosted the OHS-themed weekly radio programs called "Testi Kirlımadan" on Aşk Radio between 2011 and 2012. He supports the education of young students through his Occupational Health and Safety lectures in Istanbul Technical University and professional seminars in various universities.

Cem Melikoğlu was elected by the Türk Loydu Foundation Board as the Chairman of the Board of Türk Loydu Foundation in 2015 and 2017, and continues to serve as the Chairman.



**Atilla ÇİFTÇİ** Deputy Chairman of the Board

He was born in 1951 in Kilis. He graduated from Istanbul Technical University, Maritime Faculty in the 1974-1975 Academic Year. He is a member of TMMOB Chamber of Marine Engineers. Until 1988, he served as the Marine Chief Engineer in D.B. Deniz Nakliyatı T.A.Ş. and Chairman of the New Construction Control Committee in Türkiye Gemi Sanayi A.Ş. He worked as a specialist surveyor between 1988 and 1996 in Türk Loydu.

He served as a Vice-Chairman in 2012 and 2013 in the Turkish Association of Ship Industrialists. He is one of the founders of Defav Foundation and chaired the foundation from 2002 to 2004.

He served as a Council Member in the Chamber of Shipping between 2009 and 2013. He is currently a Council Member in Istanbul Chamber of Industry. Since 1996, he has been serving as the Chairman of the Executive Committee of Istanbul Shipyard.



**Halim METE** Treasurer

He was born in 1948 in Rize. He completed his higher education in Istanbul University, Faculty of Economics. He is the President of Mete Kardeşler Group of Companies, and a partner in nearly 15 companies within and outside the group. Apart from his profession, he served in the management of many institutions and organizations related to both his sector and various social topics. He takes active roles in the boards of numerous foundations and institutions, primarily the Union of Chambers and Commodity Exchanges of Turkey.

He is currently the Vice-President of TOBB. He is a Council Member in İMEAK Chamber of Shipping. He is married with three children and five grandchildren.

He was awarded the "High Order of Merit of the Italian Republic" in November 11, 2008 for his contributions to the relations between Turkey and Italy.



**Prof Dr Hakan AKYILDIZ** Member

Hakan Akyıldız was born in 1965 in Istanbul. In 1987, he graduated from ITU, Faculty of Naval Architecture and Ocean Engineering as a Naval Architect and Marine Engineer.

He received his M.Sc. in 1989, Ph.D. in 1999, and started his academic career as a faculty member. Prof. Dr. Hakan Akyıldız continues his academic and administrative studies as the Head of Shipbuilding and Ocean Engineering Department at ITU. Prof. Dr. Hakan Akyıldız has taken part in many academic and commercial projects, and has numerous academic publications as a result of these studies.

He has also served as a delegate of Türk Loydu at different times. Along with his academic and administrative duties and studies, he carries out projects in different disciplines as well. Prof. Dr. Hakan Akyıldız speaks English.





**Gürsel GÜRCAY** Member

Gürsel Gürcay graduated from Kadıköy Anatolian High School in 1988, and Yıldız Technical University, Department of Naval Architecture and Marine Engineering in 1995.

In 1995, he started working as a Ship Repair Officer in Torgem Shipyard, and until 2002, he worked as a Service Engineer in Nissan Otomotiv A.Ş., and as a New Construction Control Engineer in Temmar Denizcilik and Selay Denizcilik companies, respectively. Between 2002 and 2006, he made commercial and special purpose ship designs and contracting activities in ATG Mühendislik Gemi İnşa San ve Tic. Ltd. Şti., where he was a founding member. In 2006, he founded Güray Mühendislik to manufacture piping systems, and Pastem Gemi İnşa San. ve Tic. Ltd. Şti. to operate in piping system surface preparation and phosphating works, and he is currently continuing his activities in these companies. He has good knowledge of English.



**Gürsel YILDIZ** Member

He was born in 1967 in Ardahan. In 1989, he completed his undergraduate education in Istanbul Technical University, Faculty of Naval Architecture and Ocean Engineering, then received his Master's Degree from the Shipbuilding Program of Graduate School of Natural And Applied Sciences. In 1991, he received welding engineering education for 6 months in Japan, and had the chance to examine the Japan shipbuilding technology during that period. Between 1989 and 1995, he worked as a Chief Clerk in the Design Department of Türkiye Gemi San. A.Ş. Camialtı Shipyard, then completed his military duty as a reserve officer in the Taşkızak Shipyard Command.

Between 1997 and 2000, he served as the Ship Department Manager in Gemak and Torgem Shipyards, and between 2000 and 2007, in RMK Marine Shipyard. Between 2007 and 2015, he worked as Shipyard Manager of Yardımcı Group, and since 2015, he has been a member of the Academic Staff in ITU, Faculty of Naval Architecture and Ocean Engineering to support the collaboration between the University and Industry. He is currently working as the Manager of New Shipbuilding Department in Kuzey Star Shipyard.



**Ferhat ACUNER** Member

Ferhat Acuner was born in 1966. He graduated from Istanbul Technical University, Department of Naval Architecture and Marine Engineering in 1991.

Between 1994 and 2010, he served as the Company Partner and Manager in Fast Denizcilik, İnşaat ve Ticaret Ltd. Şti. Between 2007 and 2008, he served as the General Manager of Düzgüt Group of Companies. Between 2009 and 2014, he worked as the Powership Program Coordinator of Karadeniz Holding A.Ş., and since 2014, he has been the General Manager of Navtek Deniz Teknolojisi A.Ş.

Between 2015 and 2016, he served as the Vice-Chairman of the Board of Directors of TMMOB Chamber of Turkish Naval Architects and Marine Engineers. He has good command of English.



**Atilla OKSAY** Member

Atilla Oksay was born in 1972 in Ankara, and graduated from Istanbul University, Faculty of Political Sciences, Department of Business Administration in 1994.

Oksay started his career in 1995 as a researcher in the Association of Insurance, Reinsurance, and Pension Companies of Turkey, and worked as a specialist, technical group assistant manager, and technical unit manager within this association. He participated in trainings in various insurance branches, and instructed short term courses in the field of insurance at universities. He has various papers presented in sector-related meetings and seminars, as well as articles published in relation to insurance business.

Oksay was appointed as the Assistant Secretary General of the Association of Insurance and Reinsurance Companies of Turkey on 03.10.2011. He continues to serve as a member in the boards of Türk Loydu Foundation, Turkish Motor Insurers' Bureau, and OSEM Sertifikasyon A.Ş. He is married with one child.



**Mehmet Akif EROĞLU** Member

He graduated from Ankara University, Faculty of Political Sciences, Department of International Relations in 1991. He started his career in 1992 in the Undersecretariat of Treasury. Between 1992 and 2007, he took part as the bank examiner during bank audits and consolidated financial structure audits of their affiliates such as banks, financial institutions, and insurance companies.

Eroğlu completed his MBA at the Illinois University in Chicago, USA, between 2004 and 2006. Afterwards, he was appointed as the "Head of Department" in BRSA. In 2009, he joined the founding team of Ziraat Life and Pension Company as the Assistant General Management of Financial Affairs.

In 2010, he was appointed as the General Manager of the company, and the General Manager of Ziraat Insurance Company in 2012. Eroğlu has been serving as the Secretary General of the Insurance Association of Turkey (TSB) since May 2015.

He is currently a member of TARSIM, DASK, Arbitration Board, and has CPA and Independent Audit certificates.



“The rise of Türk Loydu  
Cannot Be Stopped  
Any More”

## YEAR 2017, THE BEGINNING OF THE RISE

The year 2017 will be remembered as the year when the world economies still felt the impacts of the 2008 global financial crisis, whereas a moderate improvement was seen in the world economy from the viewpoint of developed countries. As a matter of fact, according to the reports of international organizations, it is reported that in 2017, the world economy grew by 3.6 percent and the global trade volume increased by 4.2 percent.

The record-high growth rates seen last year in Turkish economy were pleasing. However, there are also the matters of the upward trend in inflation, fluctuations in exchange rates, upward trend of current deficit due to the foreign trade deficit, and high unemployment rate. 2017 was a year of good developments in the economy, which increased the hopes of all of us. Now is the time to sustain the growth trend, and of course, to fly our flag on more ships sailing in the seas of the world and to make the Turkish maritime industry invulnerable to storms.

As Türk Loydu, we completed the year 2017 by both carrying out all our projects and works in the best way possible, and carrying forward the works we started to establish a more dynamic and sustainable corporate

structure to provide us with momentum in achieving the future vision of our foundation, which is active since 1962.

With the transformation carried out in April 2017, our Economic Enterprise was incorporated, and an important stage was reached in the institutionalization of Türk Loydu by establishing the “Türk Loydu Conformity Assessment Corp.” company, and the transition period was completed problem-free thanks to a good planning.

“Türk Loydu proceeds on its way by overcoming the so-called impossible obstacles one-by-one”

After our 61st General Assembly, which was held successfully as per our New Articles of Foundation, our new Türk Loydu Foundation Board of Directors has started its duty with enthusiasm and excitement to work for our institution’s success.

We have been able to receive the results of certain works we had started in the last term, in this term. The authorization we received from the Panama Flag, which owns more than 18% of the world’s trade fleet and has over 8000 ships, has made us very happy, and the complimentary words of the Panama representatives expressed in the international arena about Türk Loydu have made us especially proud. It is clear that the Panama Flag will provide new horizons for Türk Loydu in 2018. We also would like to thank our Minister of Transport, Maritime Affairs and Communication, Mr. Ahmet Arslan, who supported Türk Loydu in every stage both when obtaining the Panama Flag authorizations and during foreign visits, and all MTMAC representatives who always encouraged and guided us with their complimentary words.





Our efforts for IACS membership, which is among our important strategic goals, continue rapidly in line with our targeted action plans. The IACS criteria, which are well integrated into our systems, have now become the Türk Loydu criteria, and increased the quality of our services.

Türk Loydu proceeds on its way by overcoming the so-called impossible obstacles one-by-one. Türk Loydu moved further up to the 9th place in the Paris MoU list, which is one of the most important indicator for classification societies, and all our employees feel the rightful joy of ranking above certain IACS organizations and existing in the “High Performance” list for years.

Our experience and competence on military ships,

which will be the largest ship of Turkey, also called a mini aircraft carrier, is a very important and major defense industry project. We have been involved in this project from the beginning, and it will change the military balance in the Mediterranean in our country’s favor.

Turkey can now export developing defense industry products and technologies, and with every military ship exported, Türk Loydu is able to export “ideas and services”, which are the products with the highest added value.

Herewith, we would like to remember with gratitude Prof. Yücel Odabaşı, one of our previous Chairman, who made important contributions to Türk

Loydu’s involvement in the MILGEM Project, and to thank the Undersecretariat for Defense Industries and our Navy Forces, which have been supporting Türk Loydu from the beginning of the MILGEM Project, ensuring development of our military ships and defense technologies.

Our research and development company established under the name “TL Teknopark ARGE Limited Şirketi” as one of the affiliates of Türk Loydu Foundation, was moved to the Head Office of Türk Loydu as of November 2016, and it now continues its operations which

have been extended as of November 2017 with success under the name TL Teknik ARGE ve Tasarım Ltd. Şti.

which started with the MILGEM Project, continue to increase every day. We fulfill this precious duty, which was assigned to Türk Loydu by our Undersecretariat of Defense Industries and our Navy, with a national consciousness and pride. It is a rightful source of pride that we classed nearly 140 military ships by now, and we are listed among the most experienced organizations in military ship classification in the world’s seas.

The LHD, multipurpose amphibious dock landing ship,

As a result of the works to restructure the company founded by our foundation in Romania, we have decided to include other countries in Eastern Europe on the coast of the Black Sea, and we have even started working to be able to obtain certain authorizations over Romania, which is also an EU member state. Within the scope of this vision, the name of our company was changed



Multipurpose Dock Landing Ship - TCG ANADOLU



to “Türk Loydu East Europe S.R.L.” from “Türk Loydu Romanya Uygunluk Değerlendirme Hizmetleri Srl”.

As of 2018, we continue our efforts on the services



and activities planned to be offered in Eastern Europe countries, primarily Romania. In 2017, we continued

our development as Türk Loydu, and maintained our growth in line with our objectives and long term strategic plans.

While expanding our existing activities in all industries in which we operate, we have also developed our technical and administrative staff. Our growth thrust will, of course, continue increasingly but in a controlled manner, in the areas related to our new target: nuclear energy, renewable energies, and rail systems.

Have no doubt that we will assume all necessary responsibilities and duties, and fulfill them successfully.

I would like to sincerely thank all members of the Türk Loydu team for their efforts and hard work in 2017, and I wish that 2018 brings success and happiness for our country.

**Cem MELİKOĞLU**

Chairman of the Board of Directors of  
Türk Loydu Foundation



“Türk Loydu Has Become  
Successful in All Sectors”

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## 2017 WAS A ‘YEAR OF ATTACK’

In our 2016 Report, we said “Türk Loydu achieved the impossible in 2016”. Year 2017, on the other hand, has been a true ‘year of attack’ for Türk Loydu. We have moved the bar of success further up in all our sectors, and the environment in which we achieved this will be remembered as a year of hard times in Turkey and in the world.

In addition to the economic recessions throughout the world in 2017, the civil war in Syria, the tensions in Northern Iraq, and by extension, the security risks and concerns regarding the terrorism and political events that affect our region, have also adversely affected the dynamics of our country’s economy. This situation causes the foreign capital with possibility to come to our country to act more cautiously. However, the positive economic data received towards the end of 2017 have increased our confidence in the possibility that the economic recession in Turkey and the world will be overcome in 2018.

After a difficult 2017 for Turkey and the world, Türk Loydu experienced the pride of successfully completing its works and closing the year 2017 above our targets. We have maintained the growth trend of the last 10 years, expanded our service areas, preserved our efficiency in the sector, increased our staff as much as possible, and have not made any concessions in our strategic development objectives set at the beginning of 2017.

The activities performed in our sector are usually called “Conformity Assessment Services”. These services are generally divided into two as “Mandatory Area” and “Voluntary Area”. In the mandatory areas, our customers work with an authorized Conformity Assessment Company as they are required to do so due to legal requirements or other reasons. On the other hand, in the “Voluntary Area”, our customers may, even not mandatory, request that their work is certified or checked by an independent institution, as they believe that such a certification would add value to their product or service. As Türk Loydu, we have experienced economic growth in the services we offer both in the “Mandatory Area” and the “Voluntary Area”, and this was a very pleasing development for us. Is this growth sufficient? Of course not.

When we look at the testing, measurement and certification services offered in the world under the Conformity Assessment Services, and removing the very small companies from this market, there are nearly 2,000 companies above a certain scale and they have more than 600,000 employees. The financial size of this market is estimated to be above 200 billion Euros. It is a known fact that major share of these services is provided by the state/government institutions or companies’ own staff. Still, nearly 35% share of this market is left to the Conformity Assessment Companies. In this situation, the size of the market outsourced via service procurement is estimated to be 70 billion Euro. Even if there is no official research published for Turkey, the Turkish market is estimated to be nearly 2 billion Euro. Unfortunately, we have to admit that, a very big part of this amount goes to the foreign companies which are represented at a very small scale (i.e. without creating any employment) or not represented at all in Turkey. To summarize, there is a very wide area for Türk Loydu to grow.

As in all industries, there is also a cutthroat competition in the “Classification and Conformity Assessment” industries, and there are giant global companies, as well as many small competitors competing with low quality and prices. The easiest competition is done by observing only the prices. However, as an organization, we aim to be the main solution partner of all our industries in Turkey, and to maintain our already-reasonable prices, increase our service quality, expand our product range, thus support our partner industries. This service understanding lies behind our success as the Türk Loydu team in growing in every area of the industries in which we operate, despite the economic uncertainties and security issues experienced.

In 2017, we increased the number and tonnage of the ships we classed within the scope of the maritime industry, and made our fleet younger. We continued to take firm steps forward towards IACS membership. We moved our close collaboration with our Minister of Transport, Maritime Affairs and Communication even further up, and tried to offer our partners new opportunities as an authorized organization of Panama, which has the largest ship register in the world.



We have strengthened our leadership in the military ship projects, and we continue working to develop our cooperation with the Undersecretariat for Defense Industries for new projects. We continue our efforts to gain new business areas, new markets, and new authorizations. Our works for the military projects, which will bring international power and reputation to our country, also continued in 2017 with a sense of national duty. Some of the important defense industry projects, which will change the balance in the seas in favor of Turkey, were delivered in 2017, and some of them are expected to begin in 2018.

While we increase the number and tonnage of the ships in our fleet, we continued to focus on their performance in port state inspections. Another important success of Türk Loydu in 2017 was keeping our place in the “High Performance” category for the last 11 years according to the Paris MoU evaluations. This performance shows that we have performed better than most IACS member organizations. The fact that no ship has been detained due to Türk Loydu’s responsibility since 2014 is a development that strengthened our success.

The position of the Turkish flag in the Paris MoU - White List, which was earned through tremendous efforts together with all partners of the Turkish maritime sector, averted the danger of falling into the Grey List in the middle of 2017, especially due to the increased number of detention incidents in Greece and the decreased number of inspections of the Turkish-flagged ships in the Paris MoU zone.

We tried to prevent any detention of ships by fighting selflessly under the leadership of Turkish Maritime Administration to protect the position of the Turkish flag in the White List. Turkish Maritime efforts came to fruition, and the Turkish flag remained in the white list also in 2017. As the listing of Turkish Maritime precious flag in the White List allows Turkish Maritime ships to move more freely in the Paris MoU zone, we, as the administration and authorized classification societies, and primarily Turkish Maritime shipowners, must act together

with a common consciousness to protect our position in the white list.

We continued our efforts in line with the progress plan prepared in 2016 for membership to IACS (International Association of Classification Societies), which is one of the biggest strategic objectives of Türk Loydu. We completed the audits performed until the end of 2017 and accompanied by the IACS observers, evaluated the results, and proceed on our way without slowing down to reach our strategic objective by continuing our works in this direction.

The practices aimed at protection of the environment such as the “Ballast Water Convention”, which entered into force in 2007 as per the international maritime legislation, and the “EU MRV” regulation which aims emission control, impose new financial burdens on our shipowners, and make competing in international waters more difficult every day.

2017 was also difficult for the Industry and Certification Sector in terms of economic data and growth figures. Despite the local and global developments that adversely affected our economy, we had important developments in our country in the area of conformity assessment, with the investments in defense industry, energy sector, and construction sector with high public infrastructure investments.

In all our industries, primarily the energy, construction, manufacturing, chemical, transportation, and logistics, we



increased our global presence, and offered our customers new service areas we have designed.

We have tried to increase our service range by signing new contracts to carry out conformity assessment services in the energy project investments which have increased in our country in the recent years. We have added new areas to our service range such as nuclear energy, renewable energy, and railway services, as well as continued our long term projects in the international arena without interruption, and this process will continue in 2018. In 2018, we will further expand the services offered by Türk Loydu.

With our competent auditors and trainers within the scope of the Chamber and Commodity Exchange Accreditation Project of the Union of Chambers and Commodity Exchanges of Turkey (TOBB), we have become the most important partner of TOBB in the auditing and training. With our quality service, we have made Türk Loydu widely known, and strengthened its brand value.

We see that now the world moves towards modernization in many areas and in an increasingly faster way. The industry 4.0 revolution, unmanned and autonomous technologies, plans for transition to electric and alternative fuel vehicles, are among the best examples for this situation. If we want to be able to compete with the world, our country must also follow the new technologies closely, and rapidly adapt to the developments in these areas.

As Türk Loydu, we have a substantial archive and library. When arranging this archive, we again remembered the opening speech of our 9th President Mr. Suleyman Demirel at our previous head office in Tuzla, Istanbul. Mr. Demirel had talked about Türk Loydu in his speech: “Comes along an institution named Loyd; an organization of reputation with a Western mindset calls and says ‘I wish there was an institution other than the ship builder, an institution which is independent and true to its word beyond argument, who would say this ship has gone through my inspection, audit, and control.

It was made according to its procedure, project, and science. This is what gives people assurance. In this way, the West has added an aspect to modernity by creating a number of institutions of reputation. Turkey finally has Türk Loydu, and its facilities as its establishments. This is an institution of its word. It is a specialized institution. When we see this institution's stamp or certificate, we know for sure that the work is complete, and what keeps this institution on its feet is its reputation. We need to comprehend the phenomenon called reputation. And these institutions stay on their feet thanks to their reputation. Therefore, they never do anything contrary to their reputation.”

It is very difficult to become the “Institution of Reputation” as mentioned by the late President Süleyman Demirel. Conformity Assessment Companies in the world have suffered big losses of reputation as a result of a few minor negligences. Conformity Assessment means to give



assurance. In 2017, the entire Türk Loydu family worked very hard, and spent great efforts. We will also continue to do so in 2018. We will reach our strategic objectives together. Our most important treasure and difference from other institutions are its qualified and quality staff. I also would like to thank whole Türk Loydu family for their extraordinary efforts and valuable contributions in 2017.

**Alper ERALP**

Türk Loydu Conformity  
Assessment Corp. General Manager







# MARINE SECTOR



**Okan ÇETİN**

Director of Marine Sector

**We Enter 2018 with Great Confidence with 18 Flag State Authorizations.**

For the maritime sector, 2017 has been a year when we dressed our wounds after passing 2016 with little damage, achieved our objectives to a great extent, and could look to the days ahead with hope.

As is known, maritime and shipbuilding industries were affected the most due to the global economic crisis that started in 2008. However, compared to the previous year, 2017 was more fruitful for both the maritime sector and Türk Loydu, hoping that the negative period that started in 2008 and lasted rather long has come to an end. In 2016, the BDI, Baltic Dry Index, receded to the lowest value in its history, and the freight revenues decreased so low that they could not meet the operating expenses, causing great pressure on the shipowners and operators. The increase of worldwide maritime transport within the frame of the global growth which started again when the impacts of the crisis lessened in 2017, has increased the demand towards transportation of resources by sea. Within this scope, we expect that the maritime trade volume will

continue to increase in the upcoming years. Regarding the protection of our position in the Paris MoU Performance list, which is one of our important objectives in 2017, we have not experienced any detention due to classification responsibility within the last three years, and we believe that this result will allow us to obtain a better level above a few IACS member organization in the said list to be announced next year.

We compete with some of these organizations with our fleet which is twice as old as theirs. When we look back, we see that now the number of our ship detentions are quite low, e.g. we did not have any detention in 2017 in Mediterranean MoU. This number is only eight in Paris MoU for Turkish Flagged ships.

Despite our disadvantage of not being an IACS member, which is an extremely difficult barrier for ship classification, we added a total of 75 ship to our fleet in 2017, 34 of which are from IACS members, including Gas Carrier, Ro-Ro, and mega yachts, which will increase the variety of ships in the fleet.



For the purpose of becoming an internationally recognized organization, which is our key driver, we enter 2018 with great confidence with a total of 18 flag state authorizations, including all certifications by Panama Flag Administration and by expanding our existing Turkish Flag authorizations so as to include all SOLAS Safety surveys and certifications.

Within the scope of new builds, Türk Loydu's operations continue in 2017 with important advances compared to previous years.

Within the year, 20 new build projects were completed including classification certificates of important military ships such as TCG BAYRAKTAR, TCG SANCAKTAR, TCG ALEMDAR, TCG IŞIN, and TCG AKIN. The first locally manufactured seismic research vessel of Turkey, MTA ORUÇ REİS, the custom-design cultural activity ship VALİDE SULTAN, and the first of four ships built to be used in Bosphorus passenger transport, KANUNİ, can be listed as the important projects completed.

The number of companies that we offer certification services has reached to 86, including those based outside Turkey. The products of companies such as SIEMENS, MTU, CATERPILLAR, RENK, NAVANTIA, FIRCANTIERI, WARSTSILLA, VOLVO, SCANIA, MITSUBISHI, and ROLLS ROYCE, are certified by TÜRK LOYDU.

Our Plan Approval and Engineering Department successfully carries out the control and approval processes of all kinds of boats, machines, electricity and stability plans for military and commercial ships, and efficiently uses the E-Pass system established to improve its efficiency in 2016.

Our Development and Statutory Legislation Department keeps our rules up to date, and announces the changes in international and Türk Loydu's rules, and other developments to the maritime sector by means of various bulletins.

Considering that there are nearly fifteen countries in the world which have the capacity to build and manufacture their own warship, combatant or auxiliary, it is clear that the Turkish shipbuilding and sub-industry have made an extremely significant progress in the recent years. As Türk Loydu, we took and continue to take part in every stage of this important progress. At this stage that we have reached by completing the project controls and field surveys, and by issuing the Class Certificates of more than 130 military ships until today, we can see that now a few military projects

are completed and delivered with success every year, and Türk Loydu is preferred for new contracts in new projects. In 2017, as the Marine Sector, we reserved major part of our energy to IACS audits.

For almost 6-7 months of the year, our head office, two local offices and 12 field operations at different scopes, were audited by the IACS and QACE observers together. Even though no major deficiencies that will interrupt the process or adversely affect the result were reported until the final moment of the audit, and the corrective actions were taken posthaste for non-conformities, at a point where we were waiting for the news of our eligibility to the Certificate of Conformity with great hopes in December, we learned that we have a system which has and can develop its own classification rules and complies with the IACS quality standards, but we have failed to reach our objective due to certain deficiencies in implementation.

Furthermore, we are aware that Türk Loydu is the only organization going through the process for new membership to IACS intended for this lofty purpose, and the membership requirements were changed and made much more difficult towards the end of 2017. At this stage, we see 2017 audits as an important step where we gained great experiences and our belief in the final positive result is now strengthened, and we have approached our target to which we are committed with a forward-looking essential condition.

Even though the global developments, supply/demand balance, and raw material need in the world directly affect the maritime industry, we are hopeful for the year 2018. The data obtained at the end of previous year predicts a better year than 2017. The stabilization of new construction orders on a certain balance with the scrapped tonnage, works intended for the renewal of the coaster fleet, acceptance of the Ballast Water Convention the fact that this rule will increase the tonnage to be scrapped for old vessels in the next 5-year period, and new regulations that will enter into force in relation to flue gases such as SOx-NOx, and Tier 3, will mobilize the markets. In 2018, it is our biggest expectation that an action that will set in motion both the coaster fleet, and the Turkish shipyard and ship sub-industry, is taken with active involvement of Türk Loydu.

We expect and hope that year 2018 will be starting point of an upward movement for the maritime sector across Turkey and the world.

## NEW BUILDING DEPARTMENT

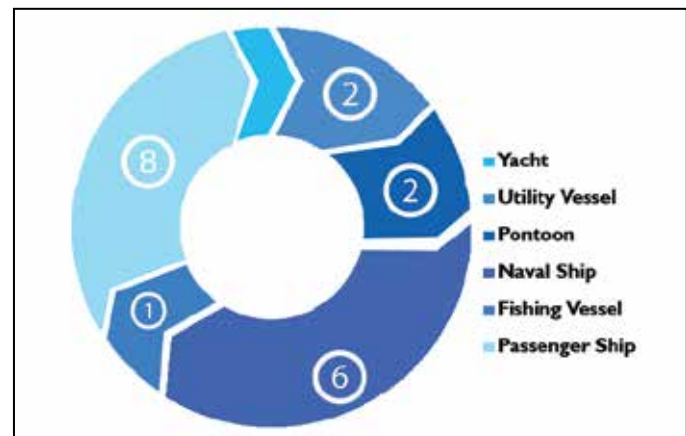
Since its foundation, our institution has increased its experience in new-build ship projects through classifications at different types and sizes, and in 2017, it provided new construction classification service for all types of ships and yachts, primarily for the Turkish Naval Forces Command. In addition to the new construction projects ongoing from previous years, new construction classification agreements were signed for 28 separate projects in 2017.

## TÜRK LOYDU IN NAVAL SHIP PROJECTS

With its fifty-five years of experience in the classification of naval ships, Türk Loydu has provided classification services for over 100 local and foreign projects. With this history in the classification of naval ships, Türk Loydu is in the leading position in Turkey, and has strengthened its leadership by taking part in all delivered, ongoing and new naval ship projects in 2017. Within 2017, 20 new construction projects were completed and important naval ships including TCG BAYRAKTAR, TCG SANCAKTAR, TCG ALEMDAR, TCG IŞIN, and TCG AKIN were given classification certificates.

With its recent breakthroughs, especially by the Undersecretariat for Defense Industries, the Turkish Naval Forces have become a naval force envied by the world. When we look at the past in this period where we approach the 100th year of the Republic, we can understand better the importance of the works completed and achieved. If

Construction Agreements Signed in 2017



you ask why a country's ability to build a national warship is important, just remember the embargoes suffered by Turkey in recent history, well known by the previous generation, however forgotten today.

Our defense industry, which was dependent on foreign countries during both World War I and the Cyprus Peace Operation, suffered difficult situations due to the military ammunition embargoes imposed by foreign countries. With these events, we have experienced the extent of importance of having a domestic and national defense industry.

Even though certain significant breakthroughs were made in building a national warship in the Republican period following the lessons gained with these experiences, the most important, result-oriented progress was made by establishing the Undersecretariat for Defense Industries and realizing the National Ship "MİLGEM" Project, plan



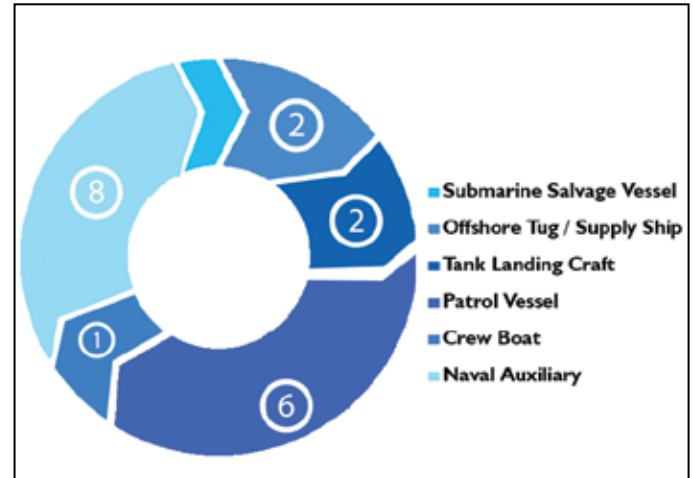
TCG ALEMDAR/TCG IŞIN

approval and engineering services of which were provided by Türk Loydu. One of the most important developments in the breakthrough started with the Milgem project and made to nationalize the defense industry, was ensuring that certain naval ship projects are built in private sector shipyards to improve the military shipbuilding capabilities of the private sector industrialists.

We take pride in taking part in every stage of the process that started with building of the first military ship by private sector, 'TCG Yarbay Kudret Güngör', in Sedef Shipyard in 1996, according to the naval ship rules of Türk Loydu. If, at the point we have reached today, a broad range of military ships such as aircraft carriers, warships, landing helicopter docks, patrol boats, landing ships, special-purpose ships (submarine rescue ships, rescue and towing ships), supply ships, naval tankers, training boats, etc. can be manufactured in private shipyards with national designs and significant local contribution under the assurance of Türk Loydu, we believe that this is the expected result of the successful policies implemented in the last 20 years.

Since its foundation in 1962, Türk Loydu both creates and updates the military rules, provides knowledge to the sector, and increases the performance of its services within this scope, with an increasing momentum. In this period where news come to the fore about the big issues faced by certain so-called developed countries in huge naval ship projects that are not built under the supervision of a classification society, Türk Loydu takes pride in serving the naval shipbuilding industry, Turkish Naval Forces, and naval

#### New Construction Naval Projects Completed in 2017



forces of the friendly nations, with its expert technical staff of over 160 members, unique classification rules, foreign offices, and reliable, independent and expert standing.

#### **“TCG ALEMDAR, TCG IŞIN, AND TCG AKIN, THE FIRST RESCUE AND TOWING FLEET OF TURKEY, BUILT AND CERTIFIED UNDER THE CLASS OF TÜRK LOYDU”**

The Turkish Naval Forces strengthens its fleet everyday, adding the most modern rescue ships to its fleet. With the addition of ship 'TCG Akın', built under the class of Türk Loydu in Istanbul Shipyard, to the navy, the three-ship rescue and towing fleet including TCG Işın and TCG Alemdar, has become the strongest fleet of the region.



TCG IŞIN/TCG ALEMDAR

The Türk Loydu class certificate of TCG Alemdar Submarine Rescue Mother Ship was delivered with a ceremony held on January 31, 2017 in the head office of Türk Loydu. The ship was built by Istanbul Denizcilik for the Undersecretariat for Defense Industries under the scope of the agreement signed in 2011 and delivered on January 28, 2017 to meet the need of Turkish Naval Forces Command as a result of the painful lessons learned from the accidents in our country's maritime history.

The 90-meter long Mother Ship of the Submarine Rescue Fleet (Moship), TCG ALEMDAR, was built to start the rescue operation within maximum 72 hours in case of an unfavorable event in Turkish territorial waters. This ship has superior maneuvering and rescue capabilities, and is the first ship built in its class under the supervision of Türk Loydu for the Turkish Naval Forces Command and Undersecretariat for Defense Industries.

Türk Loydu's expert staff spent more than 6,000 hours for TCG Alemdar, the classification activities of which started with the agreement signed between Türk Loydu, Istanbul Denizcilik and the Undersecretariat for Defense Industries in 2011. The field surveys for the ship started on April 19, 2012, and it was launched on April 28, 2014. It completed its cruise trials in January 2017, and awarded the class certificate on January 31, 2017. The Rescue and Towing ships, TCG ALEMDAR, TCG IŞIN, and TCG AKIN, which were given

the class certificates and delivered to the Turkish Naval Forces by the shipyard in 2017, have high maneuvering and position fixing capabilities, and can carry out surface and underwater rescue operations as well as fire extinguishing missions in various sea conditions.

TCG IŞIN, built by Istanbul Denizcilik and classed by Türk Loydu, was delivered to the Naval Forces Command on Saturday, July 22, with a ceremony held in Tuzla with the participation of Vice-Admiral Hasan Şükrü Korlu, Northern Sea Area Commander, and many guests. Our national-design rescue and towing ship A-583 TCG Işın was named after Lieutenant Zeki Işın who became a martyr in the Refah disaster in 1943. The TCG IŞIN with hull number A-583 is nearly 68 meters long and 14 meters wide. It employs 94 personnel and will carry out operations such as rescue of the damaged, aground, or malfunctioned ships, underwater repair, and debris removal, when needed. In case of an accident or malfunction in submarines, the ship will provide life support to submarine personnel up to a depth of 600 meters. Its unique design that complies with the military norms, standards, and class rules, has been equipped with a controllable pitch propeller system (CPP) with high maneuvering and position fixing capability, bow - stern tunnel thrusters, and a retractable bow thruster. The delivery ceremony for TCG AKIN, the last ship of the Rescue and Towing Ship project classed by Türk Loydu, which was put on the stocks on January 19, 2012 and launched



on September 3, 2014, as per the agreement signed with the Undersecretariat for Defense Industries based on the mission requirement of the Naval Forces Command, was held on December 29, 2017 at the premises of İstanbul Denizcilik Gemi İnşa Sanayi ve Ticaret A.Ş. TCG AKIN is capable of the following phases of submarine personnel rescue operation, which require meticulous planning and coordination, as well as include very different difficulties: searching and locating lost submarines, fixing and identification activities, providing ventilation and medical support to the personnel inside the submarine, providing the necessary medical attention to the personnel who need pressure room treatment, and bringing the submarine personnel to surface when required. In addition to these, TCG AKIN can also perform various underwater search and rescue activities up to a maximum depth of 1000 meters via its systems such as Multi Beam Echosounder, Active Sonar, Acoustic Tracking and Capturing System (USBL), Underwater Telephone, Remotely Operated Vehicle - ROV, and Side-Scan Sonar. Also, the manned diving capability up to a depth of 365 meters by means of the Atmospheric Diving Suit (ADS) that can be used portably from the ship with the available air and gas mixture diving facilities on the ship, and performance of various underwater repair, debris removal and open sea towing activities with automatic towing winch and crane support, are outstanding main mission functions. The design of the rescue and towing ships, classification services of which are provided by Türk Loydu, including the plan approval procedures, are completely local, and the building, equipping and system integration activities were carried out by İstanbul Denizcilik Gemi İnşa Sanayi ve Ticaret A.Ş. Within this frame, most of the systems integrated into the ship in addition to the shipbuilding materials and services, were supplied locally, and the facilities and capabilities of the Turkish industry were efficiently used by realizing almost 65 percent of the project costs via contributions of the local industries and in an 'offset' manner.

### **TÜRK LOYDU CLASSED THE LARGEST AMPHIBIOUS TANK LANDING SHIPS (LST) TCG SANCAKTAR AND TCG BAYRAKTAR.**

The classification procedures of the landing ships TCG Sancaktar and TCG Bayraktar, and 8 LCVP personnel and wheeled vehicle carriers to be placed on two ships built under the agreements signed with Anadolu Deniz İnşa Kızakları in 2016 were completed by Türk Loydu in 2017. The landing ship tank (LST) TCG Bayraktar, which is the

largest and most advanced warship of Turkey, built by the shipyards of Anadolu Tersanesi (ADİK), was delivered to the Naval Forces Command on 22.04.2017.

In addition to contributing to operational and logistics missions, TCG Bayraktar will also be able to carry out natural disaster missions when necessary, thanks to its improved and advanced combat electronic command and control capabilities. The ship was built as a mono-hull, displacement type, with complete steel construction. Its bodywork has ballistic and full personnel protection against nuclear, biological and chemical attacks.

It is the largest and most technologically advanced warship built in Turkey by the shipyards in the private sector. The ships built under the supervision of SSM (Undersecretariat for Defense Industries) and Türk Loydu according to the Military Ship Rules of Türk Loydu, are completely products of Turkish engineering.

The ships include a platform that allows landing and taking off of a 15-ton general purpose helicopter. It has one cover on each of its three sides to allow loading and unloading activities. The ships also have 4 LCVPs (Landing Craft, Vehicle, Personnel), each weighing 8 tons, able to carry 40 persons, with a speed of 20+ knots.

TCG Bayraktar and TCG Sancaktar ships, designed with a length of 139 meters, a width of 19.60 meters, a displacement of 7,254 tons can place their landing doors on waters shallower than 2 meters. The ships can carry 1,200 tons of load or various tanks, armed vehicles and other vehicles, and have a bed capacity of 566. The ships can stay on sea for 30 days without resupply and can sail 5,000 nautical miles. A main drive system consisting of 4 diesel machines, 2 reduction gears, 2 shaft systems, and 2 variable-angle propellers, is used on each ship to achieve the expected speed values and maneuvering capability. Apart from this, TCG Bayraktar has two tunnel-type bow thrusters, and 4 main generators to generate electricity.

In addition, the ships have the locally manufactured Command Control System and Stabilized Machine Gun Platform (STAMP), and many electronic and weapon systems.

In addition to their contribution to command & control, operation and logistics mission functions via their wide communication and electronic facilities, TCG Bayraktar



TCG BAYRAKTAR

and TCG Sancaktar also capable of carrying out Natural Disaster Aid missions when needed. The new-generation tank landing ships (LSTs) with considerable weapon power and above-average length within its own class, will play an important role in transport of vessels and large amount of ammunitions to be able to realize amphibious operations.

### **TÜRK LOYDU PROJECTS IN TURKMENISTAN**

Within the scope of the agreement signed between Türk Loydu and Dearsan - Gülhan partnership in 2016, the catamaran personnel carrier ship, the last of the ships built for the Turkmenistan Naval Forces, was delivered to the Turkmenistan Naval Forces. Our talks continue for quality projects that will keep our cooperation going in 2017.

In addition to the projects to be delivered to the Turkish Naval Forces, Türk Loydu continues to proudly serve in local and foreign shipyards in the projects built and being built for the navies of friendly and allied countries.

### **FASTEST OPEN SEA PATROL SHIP OF THE WORLD IS NOW IN QATAR WITH TÜRK LOYDU'S CLASS**

The cooperation between Türk Loydu and ARES, which started with the agreement signed in 2017 with ARES Shipyard for the classification of 17 Hercules series high-speed vessels, continued at full speed also in 2017. Within the scope of the agreement which stipulates the

classification of five 24 meters long, ten 34 meters long, and two 48 meters long composite high-speed vessels, the classification activities of two Ares 75 Hercules and four Ares 110 Hercules were completed in 2017.

The composite hull, 48 meters long Ares 150 Hercules, open sea patrol ship, built according to the Military Ship Rules of Türk Loydu by Ares Shipyard located in Antalya Free Zone, was delivered to Qatar representatives with a ceremony held on Friday, December 8. With a maximum speed of 37 knots, it is the fastest open sea patrol ship of the world, and has the capacity to conduct operations in the Gulf of Qatar and the oceans.

The coast guard ships project of the Ministry of Interior of Qatar consists of five 24 meters long Ares 75 Hercules speed patrol boats, ten 34 meters long Ares 110 Hercules speed patrol boats, and two 48 meters long Ares 150 Hercules open sea patrol ships. The 'Ares 150 Hercules' is the fastest open sea patrol ship of the world, and the ship with the largest composite hull ever built in Turkey.

The ship will be able to carry out operations in the Gulf of Qatar and the oceans with a maximum speed of 37 knots. Even though it will be used in the military, the ship is quite comfortable and luxurious, with interiors like luxurious hotel rooms. With the premium materials used throughout the ship from VIP cabins to lounges and the bridge, the ship also amazed the Qatar representatives. All ships within the scope of the projects were built according to the Naval Ship Rules of Türk Loydu.



ARES

## ONGOING NAVAL PROJECTS

### WORKS FOR MULTIPURPOSE AMPHIBIOUS ASSAULT SHIP (LHD) TCG ANADOLU CONTINUE AT FULL SPEED

The classification works for the multipurpose strategic amphibious landing ship TCG Anadolu continued rapidly in 2017, and important developments were witnessed. For this huge project, which is expected to be completed in 2021, the harmonious cooperation continues between Türk Loydu, Sedef Shipyard and other partners.

The Multipurpose Amphibious Assault Ship will be used in the Aegean, Black Sea and Mediterranean operation areas, and when necessary, in the Indian Ocean (north of the

Arabian Peninsula, west of India) and the Atlantic Ocean (west of Europe, northwest of Africa). The Multipurpose Amphibious Assault Ship TCG ANADOLU will be able to transport one Amphibious battalion and the required combat and support vehicles to crisis zones without the support of the main base, participate in landing operations with the landing vehicles it will carry in its dock, and it will have a flight deck which will allow day and night operations of the heaviest NATO helicopters in the inventory and tiltrotor Osprey aircrafts. Also, with TCG ANADOLU, which allows vertical landing and short-distance take-off of tactical aircrafts such as F-35B, the Republic of Turkey will be able to transform its regional power transfer capability into a middle-scale global power transfer.

TCG ANADOLU will have an infirmary/hospital with a



QC 901





TCG ANADOLU

minimum bed capacity of 30, including an operating room, X-ray devices, dental treatment units, intensive care and infection rooms, and it will be able to serve as a Hospital Ship in humanitarian aid operations.

### LOGISTICS SUPPORT SHIP COUNTING DAYS TO JOIN THE NAVY

Within the scope of the new construction agreement signed in 2015 with Selah Shipyard for 2 Logistic Support Ships, each with a cargo capacity of 6,000 DWT, and capable of meeting the fuel needs of combat elements and resupplying all fuel depots on the coast, the classification activities continue for TCG YZB. GÜNGÖR DURMUŞ and TCG ÜTGM. ARİF EKMEKÇİ Logistic Support Ships. It is planned to complete the construction of both ships, and obtain the class certificates in 2018.

The mission of the logistics ships is defined as to supply food, water, clothes, equipment, ammunition, fuel and construction materials for the operation forces; to transport personnel, tools and equipment; and to provide logistic support such as medical aid, equipment, vehicle, ship maintenance and



repair. The logistic support ships are built to meet the logistics requirement of the army in military bases overseas. These ships can approach shallow coasts and carry tons of loads. They are designed to transport military forces and materials to anywhere in the world, and land them on the desired place as soon as possible.

The works continue to deliver TCG YZB. GÜNGÖR DURMUŞ Logistic Support Ship (A-574), the first ship of the series launched in 2016, to the navy. The second of the logistic support ships, TCG ÜTGM. ARİF EKMEKÇİ Logistic Support Ship (A-575), was launched with a ceremony held

on July 8, 2017, with the participation of Prime Minister Binali Yıldırım, Minister of Transportation, Maritime Affairs and Communication Ahmet Arslan, Minister of National Defense Fikri Işık, Chief of the General Staff Orgeneral Hulusi Akar, and Commander of Naval Forces Admiral Bülent Bostanoğlu.

One of the ships was named after the martyr SAT Commando Senior Lieutenant Arif Ekmekçi, who went MIA during the 1993 Deniz Kurdu (Sea Wolf) Exercise and was found 15 years later, and the other ship was named after the SAT commando Captain Güngör Durmuş who fell martyr during an exercise. These locally manufactured ships are 106.51 meters long, 16.80 meters wide, have a transport capacity of 6,150 tons of fuel, and a helicopter platform. They have a speed of 12 knots (22 km/hour) and a range of 9,500 nautical miles (17,594 kilometers). These multipurpose ships also have a small operating room that allows surgical operations.

### **TÜRK LOYDU WILL CLASSIFY THE NAVAL FORCES EMERGENCY RESPONSE AND DIVING TRAINING SHIPS**

The classification agreement for the classification services of 35-meter long Emergency Response and Diving Training Boats was signed on November 29, 2017 with Deniz İnşaat San. A.Ş. which has undertaken the building of two Emergency Response and Diving Training Boats (AMDEB) awarded by the Undersecretariat for Defense Industries. Desan Deniz İnşaat San. A.Ş. and Türk Loydu executives participated in the signing ceremony held for



AMDEB 2

the classification of two boats to be used by the Naval Forces Command, primarily in the Marmara Region, for first response in case of marine accidents in our shores, minor underwater rescue diving activities, and applied trainings of diving personnel.

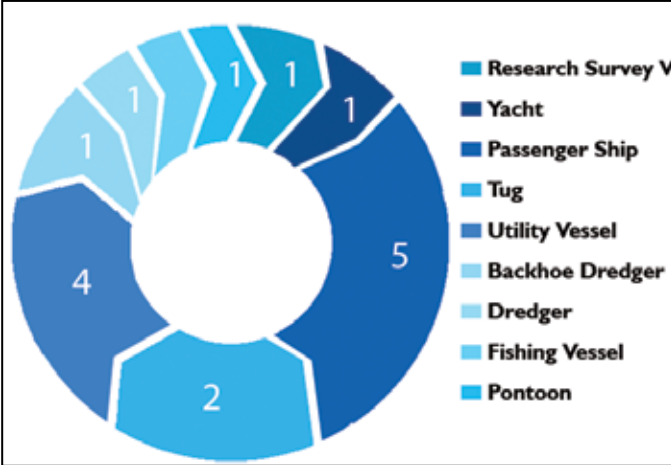
The Emergency Response and Diving Training Boats to be used in the Sea of Marmara for diving trainings and emergency diving missions will allow rescue diving and emergency response in case of accidents in the Sea of Marmara and our territorial waters, and training of personnel on rescue diving, various underwater repairs (welded / cutting / patching / riveting etc.), lift bag / pontoon usage, deep water diving, pressure room operation and treatment methods, remote controlled underwater robots usage activities and new modern diving and rescue systems in the inventory. The boats will be built under the classification of Türk Loydu.

### **TÜRK LOYDU COMMERCIAL NEWBUILDING PROJECTS**

17 commercial ship projects built under the classification of Türk Loydu were completed and given their class certificates in 2017.



## New Building Commercial Projects Completed in 2017



## TÜRK LOYDU CLASS FOR THE NEW-TYPE SHIPS OF DENTUR

KANUNİ, the first of 4 passenger vessels built by Dentur Avrasya under the classification of Türk Loydu to be used in Bosphorus, started its operations as planned. The project started with the agreement signed in 2015. It is distinguished from the similar vessels operating on the same line by its different and innovative design, and its environmentally friendly features. It has been put into service on the Üsküdar – Beşiktaş line, and met with great admiration by citizens. New-generation, environmentally friendly, quiet engines with low emission were used in the new ships with modern curves, designed in harmony with the silhouette of Istanbul, to ensure more efficient use of the sea, natural asphalt of Istanbul, to increase the share of sea transport in public transport, and to reduce the negative impact of traffic on environment.

According to the results of the dock tests of the project

performed in Poland, thanks to the special vessel form used for the first time in the world in the new ships with high maneuverability, 54% fuel savings was achieved, and at the same time, they can sail 40% faster than the existing ships. The ship provides barrier-free transport with the passenger boarding and disembarking platform custom designed for passengers with physical disabilities and used for the first time in Turkey. It also has compartments reserved for bicycles. It is stated that the project will pay for its cost in 7 years with the fuel savings to be gained. The remaining three vessels are planned to be built and commissioned in 2018.

## TURK LOYDU CLASSIFICATION FOR MTA ORUÇ REİS, THE FIRST LOCALLY MANUFACTURED SEISMIC RESEARCH

The Türk Loydu class certificate of MTA Oruç Reis Seismic Research Ship was delivered with a ceremony held in the Head Office of Türk Loydu on June 14, 2017. The construction of MTA Oruç Reis was awarded by the Undersecretariat for Defense Industries to meet the need of General Directorate of Mineral Research and Exploration, started with the agreement signed in 2012, and completed by Istanbul Shipyard.

50 persons will serve on the seismic research ship, which will leave behind RV Barbaros Hayreddin Paşa with its 86 meters length, 23 meters width, seismic operation capability, and equipment and laboratory facilities. It is expected to increase our country's oil and natural gas exploration capabilities, as well as open new horizons for the research of the mineral potential in our seas.

Türk Loydu executives and project personnel, and Istanbul







### MTA ORUÇ REİS

Denizcilik and MTA executives and employees participated in the certificate delivery ceremony for the ship named after Oruç Reis, elder brother of Barbarossa Hayreddin Pasha.

In the ceremony, Chairman of Türk Loydu Foundation, Cem Melikoğlu, talked about the superior technical features of MTA Oruç Reis, expressed their happiness for the confidence placed in Türk Loydu in such a project, and wished that Oruç Reis provides good services for our country in Turkish and global waters. CEO of İstanbul Denizcilik, Atilla Çiftçigüzeli said that a successful work was created in this challenging project, which is a first in its class, thanks to the collaboration of the expert staff and administrators of Türk Loydu, and expressed his thanks to everyone involved.

Also, the representatives of the Undersecretariat for Defense Industries and General Directorate of Mineral Research and Exploration made speeches in the ceremony. Thanks to its technical means, MTA Oruç Reis will operate not only in our seas but also with all countries with good relations, and be able to perform exploration operations with new partners in all seas of the world from poles to oceans. The said ship will be able to contribute to scientific works in many fields such as identification of the faults that cause earthquakes, and analysis of pollution rates in deep seas.

The facilities provided by MTA Oruç Reis Research Ship will be used for the scientific and technical researches planned in deep and open seas by private sector organizations or universities, subsea ground surveys, fiber-optical communication cables, natural gas and oil pipeline route or stability analyses, engineering or research projects, earthquake, climate change, sea pollution, and ecological researches. We wish that MTA Oruç Reis, a product of self-sacrificing studies of the Turkish Engineering, brings in new successes and benefits to our country.

### CUSTOM DESIGN CULTURAL ACTIVITY SHIP “ÜSKÜDAR VALİDE SULTAN” CLASSED BY TÜRK LOYDU STARTED OPERATION

The “Üsküdar Valide Sultan” ship built by Sedef Shipyard according to the classification rules of Türk Loydu to meet the need of Üsküdar Municipality, was put into service by the Mayor of Üsküdar, Mr. Hilmi Türkmen, with the ceremony held in Sedef Shipyard on August 1, 2017.

The construction of the ship, which was designed specially for cultural activities, started in 2016. It is 54 meters long, and has three decks and a passenger capacity of 580.

Üsküdar Valide Sultan Ship has hosted over 90,000 citizens in the free public tours which have been organized since August 2017. Üsküdar Valide Sultan Ship is free for the public, and cruises in the Bosphorus and Islands area. The ship’s route starts from Üsküdar and follows Beşiktaş, Dolmabahçe shoreline towards the Fatih Sultan Mehmet Bridge and the Anatolian Fortress.



### ÜSKÜDAR VALİDE SULTAN

Üsküdar Valide Sultan Ship creates a brand new communication channel for the local administrations to contact the public, allowing them to talk one-on-one with a large section of the society from students to craftsmen on the ship. In this way, the citizens can both enjoy a tour of Bosphorus and obtain information about the services and privileges offered. The design works for the ship started in October 2015, and the construction works on March 1, 2016 in Tuzla Sedef Shipyard.

### NEW MEMBERS OF THE FLEET OF GENERAL DIRECTORATE OF COASTAL SAFETY ARE READY FOR DUTY

The construction of two 26 meters long tugboats with a bollard pull of 35 tons, TÜRKEİ and MEHMETÇİK, which started to be built under the agreement signed between GETA Shipyard and Türk Loydu in 2016, was completed in 2017 and their Türk Loydu class certificates were given.



TÜRKEİ & MEHMETÇİK

### ISTANBUL MARITIME POLICE BOATS WERE ALSO BUILT UNDER TÜRK LOYDU CLASSIFICATION

The manufacturing of two 12 meters long HDPE Service boats under the classification agreement signed between Gözüylmaz Müh. İnş. Gemi San. ve Tic. Ltd. Şti. and Türk Loydu in 2016 was completed in 2017 and their class certificates were given. The Istanbul Directorate of Security has begun to use these boats in the Sea of Marmara for public security.

### GULF OF IZMIR RECEIVED ITS NEW 'SEA SWEEPER'

The construction of the Sea Sweeper named İZMİR KÖRFEZİ-3, which was designed for Izmir Metropolitan Municipality to serve in the Gulf of Izmir, was completed by GETA Shipyard in 2017 and delivered to Izmir Metropolitan Municipality.

The classification services for the vessel are provided by Türk Loydu, and it started working to give the people of Izmir a cleaner sea.

### NEW-TYPE TURKISH FISHING VESSELS ARE CLASSED BY TÜRK

Known for its support to innovative projects, Türk Loydu has started to class new-type Turkish Fishing Vessels by standing



İZMİR KÖRFEZİ-3

by the Turkish fishing industry. The fishing vessel, which will bring together the local and foreign consumers with the unique plenitude of fish in our territorial and international waters, is expected to become a pioneer for Turkish fishing vessels with its approximate length of 50 meters, modern design and challenging performance. New-build agreements were signed for four 26-meter fishing vessels to be built after İlhan Yılmaz 2, the first modern Turkish fishing vessel to be built under the classification of Türk Loydu in the same shipyard. With the new fishing vessel projects to be built in 2018, it expected to renew the Turkish fishing fleet.

### GENERAL DIRECTORATE OF COASTAL SAFETY HAS CHOSEN TÜRK LOYDU FOR TWO 70 BP TUGBOATS



İLHAN YILMAZ 4

The contract for the classification of two ASD 70 BP tugboats ordered by the General Directorate of Coastal Safety in 2017 was awarded to Yütek Makina Gemi İnşa İnsan Kaynakları Sanayi ve Ticaret Limited Şirketi, and the

classification agreement for the tugboats was signed with Türk Loydu.

The ASD type tugboats with a fully steerable propeller and nozzle system are known as the more advanced versions of conventional tugboats in terms of maneuverability. The separate and 360-degree rotation and steering impacts of both propellers allow the ASD type tugboats to be used in many different configurations and to achieve very difficult maneuvers.

They can move very fast as their pivot point are very close to the stern in stern drive. In addition to bow-first and stern-first movement options, they also have bow or stern mooring and operation options.

The tugboats are expected to be added to the fleet of the General Directorate of Coastal Safety after they are completed and received their class certificates in 2018.

## SHIPS IN SERVICE

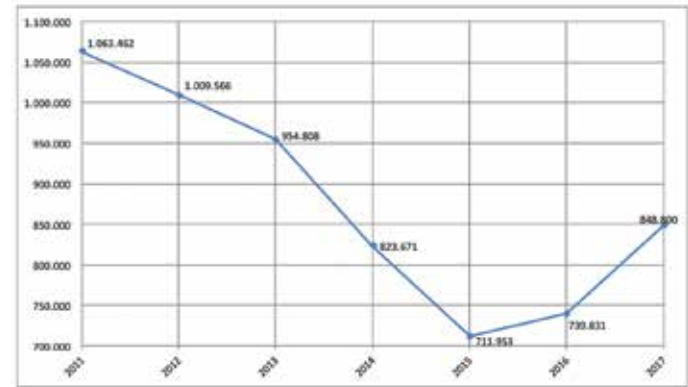
Türk Loydu's Marine Sector, Ships in Service Department is responsible for the realization of the entry to class and periodic class surveys of the Ships in Service under the classification of Türk Loydu, and their statutory surveys arising out of international maritime conventions on behalf of flag states, by permanent surveyors of Türk Loydu. 2017 has been a busy year for the classification of ships in service.

The continuing freight pressure on our ship owners and operators, certain international legal regulations that entered into force in maritime sector and increased the operating costs, as well as the security related problems in our region create pressure on the ship owners and operations, and make new investments difficult.

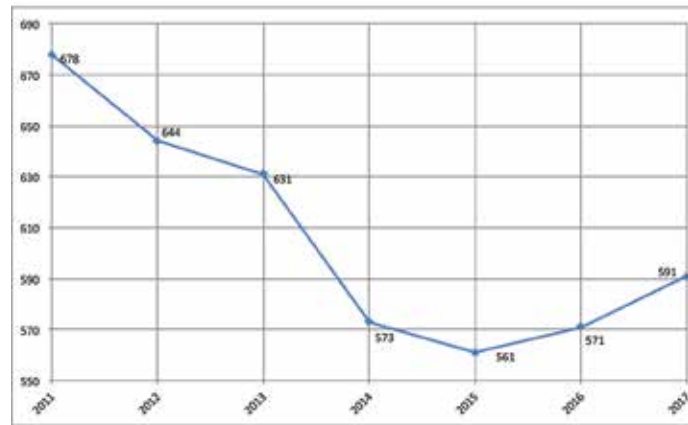
Even though it was a challenging year, the Ships in Service Department of Türk Loydu has achieved to increase the size of fleet it serves in terms of number and tonnage. In 2017, a total of 75 ships were transferred to Türk Loydu's Class via Class Transfer and Readmission to Class.

To make sure that the ships under the classification of Türk Loydu maintain their conditions and are operated according to the class rules of Türk Loydu, periodic class surveys are conducted as required to maintain the class certificates of these ships.

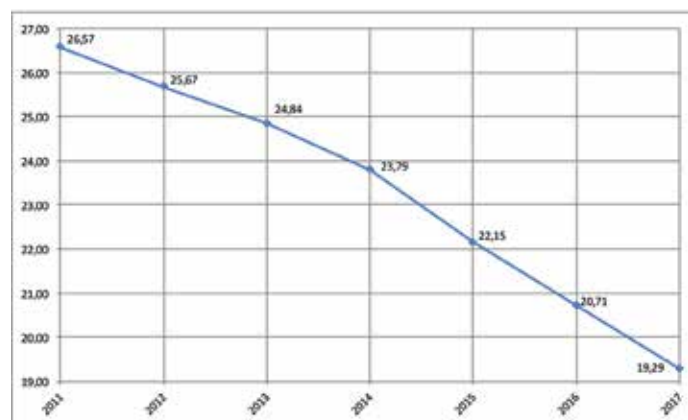
Total Tonnage of the Ships in Türk Loydu's Class



Number of Ships Classed by Türk Loydu



Average Age of Ships Classed by Türk Loydu



The ships in service department conducted the periodic surveys of the ships and vessels timely and completely throughout 2017 in line with the requests received.



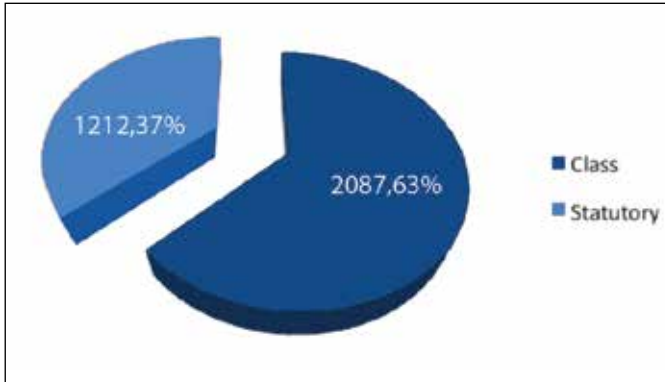
Transfer of Class (TOC) allows Türk Loydu to classify the ships and floating docks transferred by other members of the International Association of Class Societies (IACS) or not classed by an IACS member class society. As a candidate society for IACS membership, Türk Loydu carries out the class transfer processes according to the IACS procedures, and in coordination with other IACS member societies.

In line with the requests of ship owners and operators within this scope, the classes of 34 ships were transferred to Türk Loydu from IACS member class societies in 2017.

Throughout the year, the Ships in Service Department conducted a total of 3,299 surveys on the ships in our fleet.

As a result of these surveys, 1,932 certificates were issued for the ships, or their existing certificates were approved.

## Certificates Issued by Türk Loydu for Ships in Service



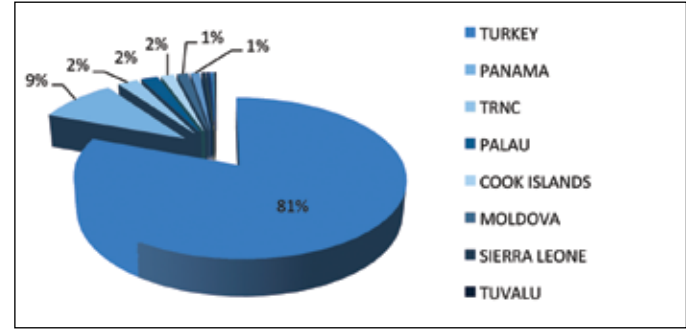
## FLAG STATE SERVICES

In addition to the survey and certification services arising out of class rules and regarding classification, Türk Loydu has been authorized by the member states of International Maritime Organization (IMO) to conduct surveys and inspections, issue certificates, and approve other related documents within the frame of international maritime rules.

## TABLE OF FLAG STATE AUTHORIZATIONS

Turkey	Panama	Azerbaijan
TRNC	Palau	Dominica
Comoros	Cook Islands	Kiribati
Lebanon	Syria	St. Vincent & Grenadines
Moldova	Mongolia	Libya
Tuvalu	Cambodia	St. Kitts & Nevis

## Türk Loydu Ship in Service - Flag Distribution

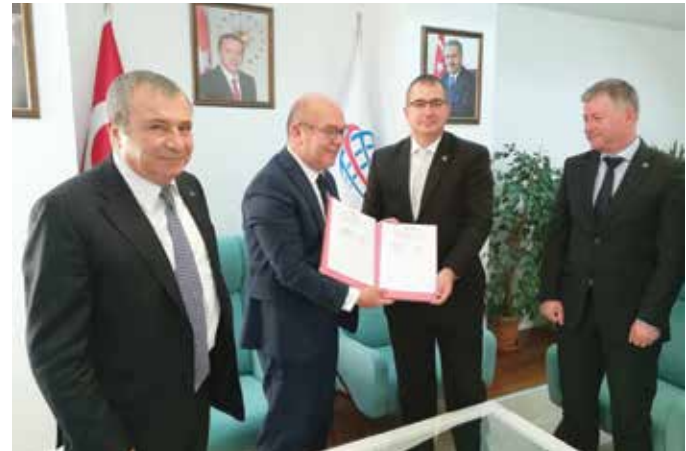


These services, which are also called “Statutory Surveys”, are performed both according to the International Conventions and Codes in force within the scope of International Maritime Law of IMO, and by meticulously following the national rules of the flag states that have authorized Türk Loydu.

With the authorizations received or extended in 2017, we have continued our works to increase the number of flag states that have authorized Türk Loydu. These works are intended to offer different opportunities to the owners and operators of ships under the classification of Türk Loydu. By the end of 2017, Türk Loydu has surveying and certification authorization from a total of 18 IMO-member flag states.

## NEW AUTHORIZATIONS TO TÜRK LOYDU FROM THE MINISTRY OF TRANSPORT, MARITIME AFFAIRS

Within the scope of the “Regulation on AND communication. Societies Authorized for Vessels”, an authorization protocol was signed between Türk Loydu and MTMAC on 18.10.2017.



With the protocol signed with MTMAC, Türk Loydu was given additional authorizations, and authorized to conduct all international statutory surveys on Turkish flagged ships and to issue all mandatory certificates.

The renewed authorization transfer protocol with an extended scope was signed on 18.10.2017 in a signing ceremony held in the Ministry of Transport, Maritime Affairs and Communication with the participation of Mr. Ahmet Selçuk Sert, Deputy Undersecretary of Ministry of TMAC, Mr. Yılmaz Taşçı, Head of Vessel Inspection Department, Mr. Cem Melikoğlu, Chairman of the Board of Directors of Türk Loydu Foundation, Mr. Atilla Çiftçigüzeli, Vice Chairman of the Board of Directors, Mr. Gürsel Gürçay, Member of the Board, and Mr. Alper Eralp, General Manager of Türk Loydu Conformity Assessment Corp. Within the scope of the renewed authorization transfer protocol with the Ministry of TMAC, Türk Loydu has also been authorized to carry out the survey procedures of Safety Construction Equipment Safety, and Radio Safety certificates within the scope of SOLAS Convention on Turkish flagged ships. Extension and renewal of Türk Loydu's survey and certification authorization, which is exercised with high quality of service and according to international standards, is a result of the confidence placed in Türk Loydu, and we would like to thank Mr. Ahmet Aslan, our Minister of TMAC, Mr. Suat Hayri Aka, our Undersecretary of MTMAC, and all MTMAC bureaucrats and employees for their valuable contributions in the authorization transfer process.

## **PANAMA FLAG HAS AUTHORISED TURK LOYDU**

The protocol regarding the authorization of Türk Loydu was signed with the ceremony held in Istanbul on November 7, 2017, between Türk Loydu and Panama Maritime Authority, which is the maritime authority of Panama and one of the leading and important flag states in the world. With this protocol, Türk Loydu has been authorized to conduct the mandatory surveys and issue the mandatory certificates required by the class certificate on Panama flagged ships and the international maritime conventions.

The Panama Maritime Authority is responsible for management of the largest ship registry of the world with more than 8,000 registered ships, which represents 18% of the world's merchant fleet. This year, Panama Maritime Authority celebrated its 100th anniversary. It serves 24/7 all over the world with 9 Segumar Technical Offices and Special Marine Consulates in 64 countries including Turkey.

Panama Maritime Authority Merchant Marine Directorate General Manager Fernando Solorzano, Consul General of



Panama in Istanbul Andres Nunez, Turk Loydu executives, as well as General Manager of Ministry of Transport, Maritime Affairs and Communication Naci Kaya, IMEAK Chamber of Shipping Chairman Metin Kalkavan and other leading figures of the Turkish maritime community participated in the ceremony for the signing of the authorization transfer protocol.

Selection of Türk Loydu as an authorized body by the Panama Maritime Authority, which has the largest and most reputable ship registry of the world, is a result of the confidence placed in Türk Loydu.

In this important development on Türk Loydu's way to realize its international goals, we first would like to thank Panama Maritime Minister Barakat Pitty, Deputy Minister Agustin Moreno, Representatives of Panama Maritime Authority, as well as Minister of TMAC Mr. Ahmet Arslan, Undersecretary of MTMAC Mr. Suat Hayri Aka, General Manager of Ministry of TMAC Mr. Emre Dinger, and all TMAC bureaucrats and employees and Türk Loydu executives and employees for their valuable contributions in the authorization transfer process.

On this special day of November 6, which is also Panama's National Day, Chairman of the Board of Directors of Türk Loydu Foundation Cem Melikoğlu presented a thank you

plaque to Panama Maritime Authority Merchant Marine Directorate General Manager Fernando Solorzano, and Consul General of Panama in Istanbul Andres Nunez. Consul General of Panama in Istanbul Andres Nunez and Panama Maritime Authority Merchant Marine Directorate General Manager Fernando Solorzano also presented a plaque to the Chairman of Türk Loydu Foundation Cem Melikoğlu.

## PORT STATE CONTROLS

To make sure that the ships in our fleet meet the high standards at all times, the results of the port state controls of the ships are continuously monitored by Türk Loydu. Within the monitoring activities, all findings discovered in port state controls and the data obtained as a result of research processes are analyzed, and corrective and preventive actions are taken for the ships in our fleet.



Within the scope of the fleet monitoring process carried out to improve the performance the ships in our fleet in the port state controls and to be able to identify beforehand the potential problems, 50 target ships were identified at the beginning of 2017, and non-programmed surveys were

Paris MoU 2017 Recognized Organization Performance Table

Valid 1 July 2017							
Recognized Organization performance table 2014-2016							
Recognized Organization		Inspections 2014-2016	Detentions 2014-2016	Low/Medium limit	Medium/High limit	Excess Factor	Performance level
American Bureau of Shipping	ABS	5703	1	132	96,17	-1,97	High
Lloyd's Register	LR	12500	4	276	223,75	-1,96	
DNV GL AS	DNVGL	11600	10	257	206,70	-1,89	
Bureau Veritas	BV	11453	23	254	203,91	-1,76	
Korean Register of Shipping	KRS	1091	1	30	13,71	-1,73	
Registro Italiano Navale	RINA	3743	9	89	60,27	-1,65	
China Classification Society	CCS	818	1	23	9,27	-1,57	
Nippon Kaiji Kyokai	NKK	7965	28	180	138,25	-1,56	
<b>Türk Loydu</b>	<b>TL</b>	<b>591</b>	<b>1</b>	<b>18</b>	<b>5,72</b>	<b>-1,22</b>	
Russian Maritime Register of Shipping	RMRS	3368	24	81	53,49	-0,99	Medium
Polski Rejestr Statkow (Polish Register of Shipping)	PRS	454	4	14	3,67	0,03	
Croatian Register of Shipping	CRS	147	0	6	0,00	0,05	
International Naval Surveys Bureau	INSB	589	7	18	5,69	0,11	
Indian Register of Shipping	IRS	79	0	4	0,00	0,19	
Phoenix Register of Shipping	PHRS	241	3	9	0,74	0,28	



conducted on these ships in 2017. These ships obtained successful results in the port state controls they went through in 2017.

A significant increase was identified in the detention incidents occurred as a result of the PSC inspections performed on ships in 2017 within the scope of Paris Memorandum, especially in the ports of Greece and Italy. The biased detention decision of the PSC authorities against Turkish flagged commercial ships and yachts calling Some European ports in 2017 has urged the Ministry of Transport, Maritime Affairs and Communication to take action. Especially, when the Turkish flagged ships that sailed to some islands in the last months of 2017 were arrested as a result of the inspections performed within the scope of Paris Memorandum, the Ministry of Transport, suspended Affairs and Communication took measures and suspended Turkish flagged ships from sailing to some European ports. We believe that these events also had an influence on the detention of certain commercial yachts and ships that sailed to some European ports. The analyses performed by the PSC Unit of Türk Loydu show that the highest number of ship detentions in 2017 among the Paris MoU member port states is in the ports of Italy. According to the reports regarding the detained ships, the most recorded deficiencies are related to Fire Safety and ISM Code.

To increase the success rate, we have worked to improve the Fleet Monitoring and Port State Inspection Procedures in line with the feedbacks received as a result of the evaluations performed within the year, and we have started to track the ships more efficiently with additional criteria. As a result of these works, in the “Class Societies” performance list announced by the Paris MoU, the most important of all port state controls, Türk Loydu was again announced as a “High Performance” class society, as it was in the last 11 years. Türk Loydu ranked 9th in this list, once more above some of the IACS member class societies. In the inspections performed on Türk Loydu classed ships, no detention caused by Turk Loydu responsibility has occurred in the last three years. This is a very important indicator of the quality of the ships in our fleet. We also monitor the PSC inspection results of the ships in our fleet around the world at the ports they enter in addition to Paris MoU, including Mediterranean MoU, Blacksea MoU, Tokyo MoU and USCG.

In the Mediterranean MoU, which was created by the countries that have a coast on the Mediterranean and of which Turkey is also a member, has the highest number of

ship inspections in our region after Paris Mou. In 2017, 47 Türk Loydu classed ships were inspected in this MoU. The fact that no ship was arrested as a result of these inspections have made us proud. In the same period, it was recorded that a total of 180 ships, including many that belong to IACS member organizations, were detained.

The performance displayed by Türk Loydu classed ships in the Mediterranean MoU has made us proud. In another important PSC regime in our region, the Black Sea MoU, Türk Loydu classed ships have also obtained successful results. As a result of the PSC inspections performed throughout the region within 2017, a total of 284 detentions was recorded, and no Türk Loydu classed ship was detained due to a classification fault.

## **TÜRK LOYDU'S FLEET VARIETY INCREASING**

Through the class transfers made, it is aimed to increase the variety of ships in Türk Loydu's fleet. Within this scope, the class transfer of GAMMAGAS tanker owned by Sözcüz



GAMMAGAS

Lpg Dağıtım Depolama ve Nakliye A.Ş. was completed successfully, and the said ship was added to Türk Loydu's fleet with LPG TANKER notation. The LPG tanker named GAMMAGAS, which was built in 1992 in Dunston Richard Hessle Shipyard in England, is 100 meters long, 15 meters wide, and has a capacity of 4,400 cbm.

## **MEGA YACHTS CLASSED BY TÜRK LOYDU**

Since its foundation in 1962, Türk Loydu has successfully provided classification services with its expert staff for all types of commercial and military ships as well as wooden boats and yachts conventionally built in the past, modern boats and yachts built from all types of shipbuilding materials, and mega and super yachts.

As a result of the works for classification of mega yachts by Türk Loydu, the class transfers of Palmarina ve Hazar Yıldızı, two mega yachts of Palmali Holding world-famous with their elegance and superior navigator features, were successfully completed in 2017, and they were classed by Türk Loydu.

Within the scope of the works to support the Turkish flag and improve Turkish Yachting, the mega yachts changed to Turkish flag, 50 meters long Hazar Yıldızı and 45 meters long Palmarina, were classed by Türk Loydu and set sail. Türk



PALMALI YATI

Loydu has considerable experience in classification of yachts and every type of special boats, and plays an important role in the yacht industry with these characteristics. It provides fast and value-added services to yacht owners, managers, designers and shipyards at the design and building stages, and throughout the service lives of yachts. Following the entering into force of the Omnibus Bill no. 6770 in January 2017, which facilitates changing to the Turkish flag, and in order to support this action initiated by MTMAC and contribute to the strengthening of our national fleet, the necessary practices has been initiated to help yachts to switch to Türk Loydu's class. Within the scope of the campaign, discounts up to 75% from Türk Loydu's tariff have been made for these yachts.

### BALLAST WATER CONVENTION

The rules and regulations that entered into force in a period where the impacts of the crisis are felt strongly in the maritime sector create new risk areas for the ship owners. The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM), which was adopted by the International Maritime Organization (IMO) in 2004, entered into force around



the world on September 8, 2017. Before the convention entered into force, Türk Loydu conducted the necessary surveys on 93 ships in 2017, and issued certificates for the ballast water management plans.

### DAMAGE AND REPAIR SURVEY SERVICES

The ships, which are under the classification of Türk Loydu and have a valid class certificate, must have the damage, repair and extraordinary surveys conducted for the continuity of their class certificates. As a result of the changing economic indicators and increased operating costs in the maritime community, time management has become very important. Türk Loydu has set it as its goal to meet the requested services timely and efficiently in order not to disturb the schedules of the operated ships. The extraordinary surveys on ships are mostly conducted in combination with the periodic surveys to not restrict the ship operations and to minimize the costs. The damage and repair surveys, which are conducted in extraordinary situations, are conducted according to the rules of Türk Loydu, and the seaworthiness of the ships is ensured as soon as possible as a result of the alternative solutions offered and the approach of expert surveyors.

### PRE PURCHASE SERVICES

Before purchasing of vessels by Türk Loydu, fact-finding survey services are provided by the Ships in Service Department. The defects specified in the prepared fact-finding survey report may significantly reduce the value of the vessel, and



substantial investment may be required to eliminate such. The fact-finding survey report is a summary of the survey conducted on the ship. It contains information about compliance of the construction of a ship with the class and international rules in general, and about the general condition of the existing systems. The report is supported with various photos and documents. The scope and time of the fact-finding survey depend on the type and size of the ship. If a buyer states a special situation, inspection and reporting are made according to the relevant situation. Türk Loydu is also the most preferred class society of Turkey in the field of valuation survey services.

Within the scope of these activities, the fact-finding survey of the 37,423 GT floating dock named SFN DOCK 2, purchased by Sefine Denizcilik Tersanecilik Turizm Sanayi Ticaret Ltd., was successfully completed, then the ship was admitted to Türk Loydu class.

### **SHIP MANAGEMENT SYSTEM SERVICES**

Türk Loydu has been authorized by various maritime authorities to provide services regarding inspection of compliance of the companies and the ships they operate with the IMO ISM Code requirements, issuing of the necessary certificates, approval of the ship safety plans within the scope of the ISPS Code, ship safety verifications, and issuing of international certificates.

2017 has been a busy year also in this field, and Türk Loydu has performed the inspections related to ISM and ISPS Codes on behalf of different flag authorities as an Recognised Organisation. Within the year, Türk Loydu registered 14 new operator companies according to the ISM Code, and increased its total number of registered companies to 100. In 2017, 18 ships were given Safe Management Certificates (SMC) for the first time, and the total number of ships with ISM Safe Management Certificates issued by Türk Loydu reached to 240. By the end of 2017, Türk Loydu serves

within the scope of ISM Code on behalf of 17 Maritime Authorities.

With 8 new ships certified by the Ships in Service department in 2017 according to the ISPS Code, the total number of ships with ISPS Security Certificates issued by Türk Loydu has reached to 104. By the end of 2017, Türk Loydu serves within the scope of ISPS Code on behalf of 16 Maritime Authorities

### **GREENHOUSE GAS VERIFICATION SERVICES**

Within the scope of Greenhouse Gas Verification Services for the maritime sector, Türk Loydu continued its works towards the regulations related to IMO and the European Union also in 2017.

First of all, to increase the knowledge level of the industry, various seminars have been organized, including the symposium organized by the Chamber of Marine Engineers in the Chamber of Shipping in cooperation with IMEAK Chamber of Shipping, and the maritime sector was given technical information about the greenhouse verification process.

Within this scope, Türk Loydu signed an agreement with Verifavia, an expert organization in this field, and started to provide services on EU MRV in July 2017. It provides consulting for the preparation of monitoring plans and creation of emission reports by ship owners and operators, and ensure that the mandatory monitoring plans and emission reports are evaluated and approved.





Within the scope of the EU MRV works carried out this year for the first time, the monitoring plans of 15 ships in the maritime sector were prepared, and approved by the verifying organization.

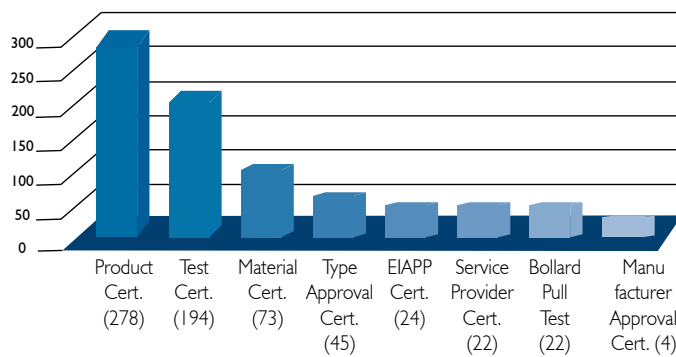
## OTHER DEVELOPMENTS

The works for increasing the number of foreign customers in our portfolio continued in 2017. The class transfers of two ships operated by the Greek Lidmar Shipping & Trading Company, were successfully completed, and the ships were admitted to the class of Türk Loydu.

## MATERIAL, PRODUCT AND COMPANY CERTIFICATION

With the increase of the new-build projects carried out under the classification of Türk Loydu, very valuable increases have been observed also in the material and product certification projects in terms of both quality and quantity. In 2017, the Material, Product and Company Department signed 662 certification agreements.

Number of Certificates by Type



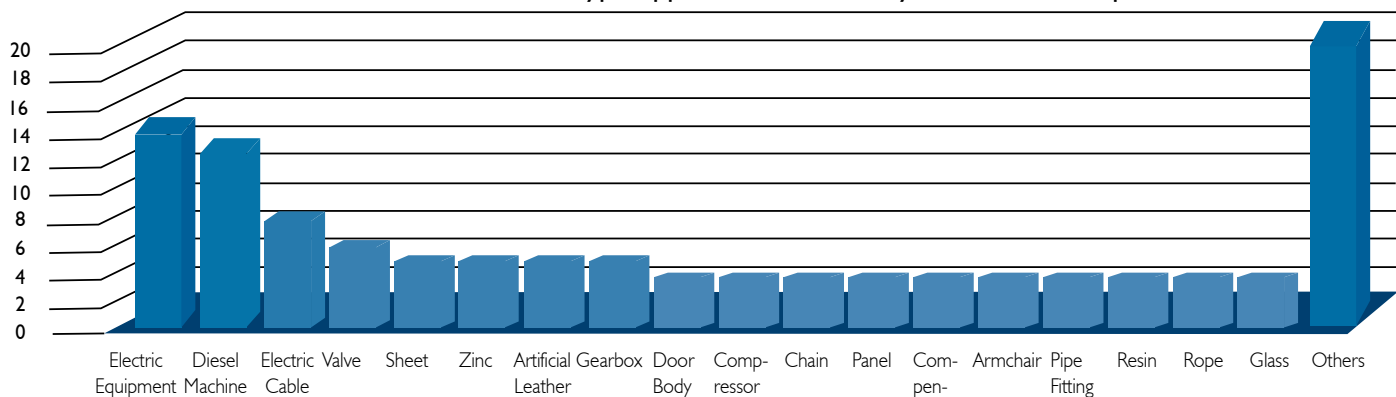
The distribution of the signed agreements by type is given in the table below.



In 2017, the type approval certificates for many new products were successfully completed, and the type approval certificates of many existing products were renewed by Türk Loydu. In 2017, type approval certification agreements were signed for the new types of the leading diesel machine manufacturers of the world such as MTU, Wartsila, Mitsubishi, Scania and Volvo. The type approval certification projects for the new products of the companies that manufacture some of the most preferred products in the maritime sector, such as Caterpillar, Tenmat Ltd, Scania, Baudouin, Shanghai Diesel and Jotun Boya, were completed and their type approval certificates were issued. In 2017, the number of companies with type approval certificates issued by Türk Loydu was increased by 21 and reached to 86, including the companies based outside Turkey.

The distribution of type approval certificates by product variety are given in the table below.

Distribution of Products with Type Approval Certificates by Number of Companies



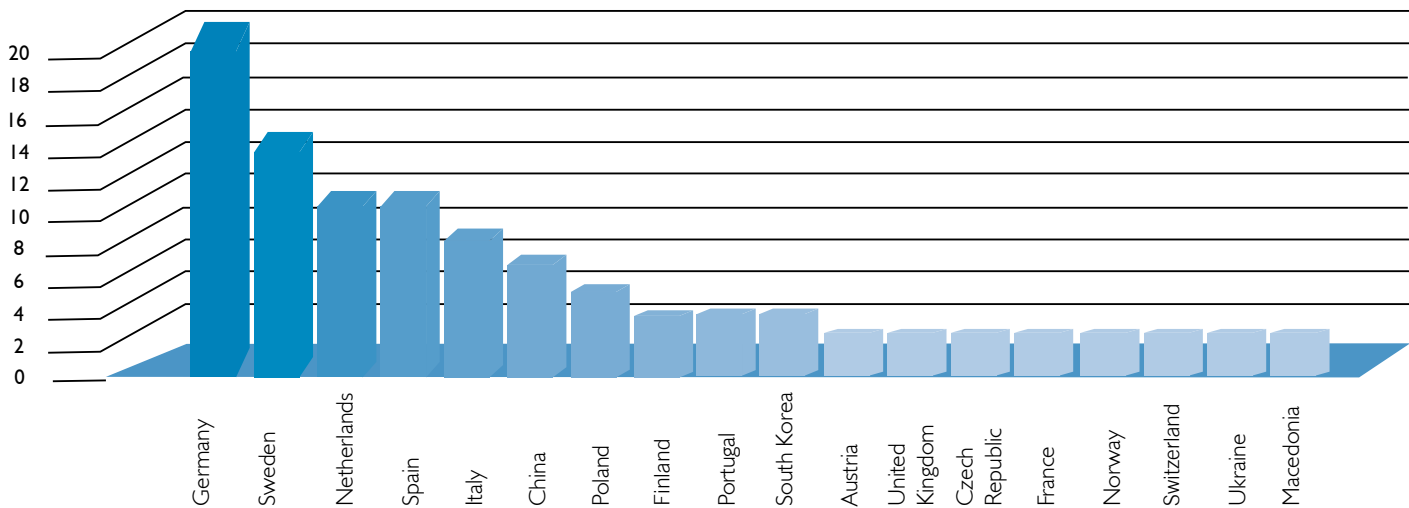
(Others; Water jet, Turbocharger, Coupling, Generator, Separator, Paint, Ejector, HP Profile, Boat, Battery, etc.)

In 2017, product certification projects were started with the leading equipment manufacturers of the world, and these projects are ongoing. The primary ones among these are: the Tunnel Type Thruster manufactured by Brunvoll AS and used in the LHD project, Generator Sets manufactured by Navantia, Bilge Keel Roll Damping System manufactured by Fincantieri SpA, and POD system manufactured by Siemens AG. The certifications of these products have been successfully completed by Türk Loydu. We can also list the following product certification projects: the Z type thruster manufactured by Wartsila Propulsion and used in the tugboats built for the Coastal Safety, diesel machines manufactured by Wartsila Italy S.p.A., diesel machines manufactured by MTU and used in the TVEG project, gear boxes manufactured by RENK, CPP system manufactured by Andritz Hydro GmbH, and water jets manufactured by Rolls-Royce and used in the projects of Ares Shipyard.

ships; control and approval of the theoretical calculations of the ships (stability, damaged stability, longitudinal strength, grain loading, freeboard, etc.); structural design analysis of the lifting equipment and local structures by using the finite elements method; control and approval of the plans of Multipoint Mooring Buoy Systems for tankers; verification of the EEDI technical files of the International Energy Efficiency certification; structural analysis of the drive systems in terms of vibration (torsion, bending, shaft alignment, etc.); control and approval of documents and risk assessment services within the scope of Marine Warranty surveys.

As in previous years, we continued to carry out certification projects with manufacturer companies in many locations of the world also in 2017. We took firm steps forward to becoming a global classification society by signing 139 certification agreements with 81 different foreign

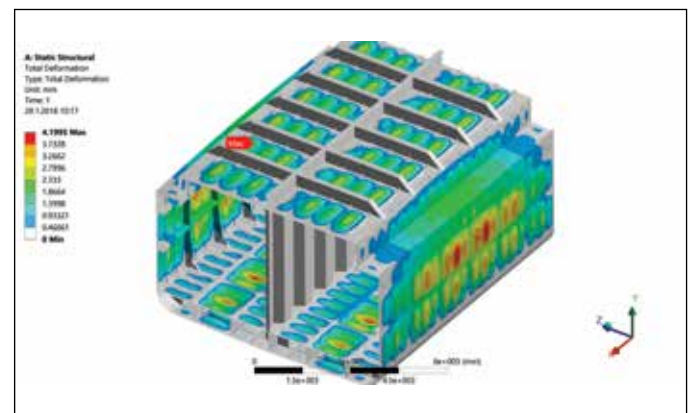
Number of Foreign Companies



## PLAN APPROVAL AND ENGINEERING DEPARTMENT

The Plan Approval and Engineering Department within the Marine Sector consists of the Vessel and Stability Unit, Machine and Electricity Unit, and Flag State Approvals Unit. The department's activities include the followings: control and approval of the vessel, machine and electricity plans for the classification of all types of military and commercial ships and marine structures newly built under the supervision of Türk Loydu and those that will be transferred to Türk Loydu via transfer of class; control and approval of the vessel, machine and electricity plans on behalf of the authorized Flag States; control and approval of the plans for issuing of type and product approval certificates of military and commercial

manufacturing companies in 2017. The distribution by country of the foreign manufacturers with which certification agreements were signed is given in the table above.





In 2017, the hull, machine and electricity equipment and stability calculations of TCG Anadolu - LHD - Multipurpose Amphibious Assault Ship, TCG Ütgm. Arif Ekmekçi – LDG - Logistic Support Ship, LCM class Mechanized Landing Ships and Class I Frigates, building processes of which continue under the supervision of Türk Loydu, were approved according to Türk Loydu's Military Ship Rules. Towards the end of 2017, AMDEB Emergency Response and Training Boat agreement was signed, and plan control service has started.

In 2017, the hull, machine and electricity equipment and stability calculations of the built and delivered LST - Amphibious Tank Landing Ship, KURYED - Rescue and Towing Ship, LDG - Logistic Support Ship, MOSHIP - Submarine Rescue Main Ship, and HERCULES 75/I 10/I 50 - Multipurpose Patrol Boats, were approved according to Türk Loydu's Military Ship Rules. The merchant ship activities also continued in 2017 at full speed, and the vessel, machine and electricity equipment and stability calculations of Dentur Coasting Line Passenger Ships, Dedetaş Coasting Line Passenger Ship, Çakırlar A Coasting Line Passenger Ship, Gelibolu NB50 Ro-Ro Passenger Ship, Med Yılmaz Escort Tugboat, Akif Türk Product Tanker, UMO Fishing Vessel, Herçelik Dredger and Hopper Barge, İZM HDPE Patrol Boats, Barbaros Work Boats, Pratika Servcie Boat and Arte Waste Collection Ships, building of which are ongoing under the supervision of Türk Loydu, were approved according to the rules of Türk Loydu.

Other activities of the department in 2017 include approval of the lifting equipment projects and plans of multipoint mooring systems for tankers.

The services for the approval of Ballast Water Plans, which were added to the scope of the agreement when the International Convention for the Control and Management of Ships' Ballast Water and Sediments entered into force on 08.09.2017, are carried out by Türk Loydu.

The International Energy Efficiency certification processes carried out within the scope of the regulations of the International Maritime Organization aimed at improving energy efficiency in international transportation, and the activities for verification of Energy Efficiency Design Index files, have been continued during the year.

### **RULE DEVELOPMENT AND STATUTORY LEGISLATION DEPARTMENT**

Türk Loydu Rule Development and Statutory Legislation Department continues to carry out the rule development activities based on the rules it published at the beginning of 2017 titled "Volume C, Section 36, Open Sea Service Ships", and to expand its sectors. Throughout 2017, the Rule Development and Statutory Legislation Department continued updating and translating the rules available only in Turkish into English. For this purpose, preliminary preparation works on a few critical rules have been completed and the Department plans to publish these rules within 2018. Within the year, Türk Loydu continued its activities for updating the military ship rules, which is another long-termed project, and for aligning the set of rules for military ships with the current international rules.

In 2017, Türk Loydu continued its Technical Committee



works that started in 2016 to better review and validate the rules and to share opinions, and created its Technical Committees for Commercial and Naval Ships in 2017. In line with the changes in international rules and standards, and the feedbacks received from the industry, Türk Loydu updates its main rules twice a year in Turkish and English. In 2017, it updated the rules listed below.

## **Classification and Surveys**

### **Volume A**

- . **Section 1**, Rules for Building Hulls
- . **Section 2**, Material Rules
- . **Section 3**, Welding Rules

### **Volume B**

- . **Section 4**, Machine Rules
- . **Section 4.-I**, Automation Rules
- . **Section 5**, Electricity Rules

### **Volume C**

- . **Section 7**, High-Speed Vessels
- . **Section 9**, Rules Regarding Building and Classification of Yachts
- . **Section 10**, Liquefied Gas Tankers
- . **Section 22**, Dynamic Positioning Systems
- . **Section 28**, Ventilation Rules
- . **Section 33**, Rules Regarding Building of Polar Class Ships
- . **Section 35**, Preliminary Rules for Ships Below 500 GRT
- . **Section 36**, Open Sea Service Ships

### **Volume D**

- . **Section 53**, Underwater Vessels
- . **Section 76**, Principles Regarding Environmental Protection Systems
- . **Section 78**, Rules for Classification of Ships Powered by Gas or Other Fuel with Low Flash Point

In addition to these rules, two more rules were updated, and the changes in the international rules and the rules of Türk Loydu, and other developments were announced to the maritime sector with 11 bulletins.

Even though the International Convention for the Management of Ballast Water officially entered into force in 2017, it has also brought along the discussions about clarification of the implementation dates of ballast water treatment systems. Türk Loydu follows this subject on the basis of both IMO and its own fleet, and has announced the developments in this subject on its bulletins.

Türk Loydu continued its research and development activities also in 2017, and updated its existing memorandums of understanding with Istanbul Technical University and Yıldız Technical University. It has applied for projects within the scope of European Union Erasmus+, and Martera Calls, and its SEAMAP (Searching the Extensive Application at Maritime Protocol) project application has been accepted. It will continue its works in the SEAMAP project with five national and international partners in 2018.

## **MEETINGS AND VISITS**

Türk Loydu actively participated in international meetings in 2017, primarily the meetings of International Maritime Organization (IMO), and continued to inform the industry with its preliminary and final meeting reports and bulletins. In 2017, it participated in SDC 4 and SSE 4 subcommittees, and MSC 98 and MEPC 71 main committees at IMO.



It continued its participation also in 2017 in the works of INSA (International Naval Safety Association), which ensures development of the Naval Ship Code (ANEP-77) and Naval Submarine Code, focusing on the safety of life and property requirements of the military ships at peacetime. It continued to contribute to "Chapter III Stability WG and Chapter VI Fire correspondence WG" INSA working groups in 2017, and is also a member of the NSCA (Naval Ship Classification Association), one of seven class societies that operate in the military sector.

### THE PRIDE OF THE NAVY, TCG ANADOLU TO BE CLASSED BY TÜRK LOYDU

Chief Surveyor  
**Seyhan ÖZKAN**

As Türk Loydu, we enjoy the justified pride of being at every stage, from its beginning until its delivery to Turkish Naval Forces, of the Multipurpose Amphibious Assault Ship (LHD) TCG ANADOLU project, also known as an aircraft carrier by the public. It is the final point reached in the development of the Turkish Defense Industry without making any concessions to the principle of independence, reliability and impartiality, and it boldly emphasizes the fact that, from now on, Turkish Naval Forces will become the attacking and striking power in the seas of the world.

Being in such a big project during the process of membership to the International Association of Classification Societies (IACS), and the successes obtained and contributions made to the process in the meantime, make Türk Loydu personnel proud and put us in a respectable place in the international arena.

At this point reached in the story of military shipbuilding on the road to this huge project, which started with the ship TCG Yarbay Kudret Güngör and now with the TCG ANADOLU which will find a place for itself in literature among aircraft carriers, Türk Loydu has taken part in more than 100 national and international military projects, and has been working selflessly with its expert technical and administrative staff to transfer its broad experience to this project of vital importance for the continuance of Turkish Nation.

This ship creates a strong platform according to the changing needs of the Turkish Armed Forces, and it will have a dock

that will allow landing of our new generation F35 tactical fighter aircrafts at wartime, and an infrastructure that will allow full-time operation of 19 F35 aircrafts, if necessary.

Also, it will have a platform that will allow full capacity operations of aircrafts of various types and sizes, including our national pride, the ATAK helicopter, even under severe sea and weather conditions.

In addition, it allows deployment of a fully-equipped battalion of our soldiers together with up to 46 ALTAY tanks and mechanized support vehicles under full protection from air and sea. At peacetime, it will be able to use the LHD in Natural Disaster Aid (DAFYAR) missions, when necessary. Thanks to its full-fledged hospital and operating room, it can be used for medical support within the scope of natural disaster aid, humanitarian aid, and refugee evacuation operations.

TCG ANADOLU, an indicator of Türk Loydu's classification activities and, by extension, its qualified personnel structure, has strengthened the place of Türk Loydu in future military and civilian projects as an independent, reliable and impartial partner.

With the TCG ANADOLU project, Türk Loydu has strengthened its place and standing in the naval projects in a manner worthy of its name, and it is taking firm steps forward backed by its successfully completed projects of vital importance for our nation, also serving the land and air forces.



#### **TCG ANADOLU technical features:**

- Length: 231.82 m.
- Flight deck length: 202 m.
- Width: 32 m.
- Height: 58 m.
- Max. Speed: ~ 21 knots (under full load)
- Constant Economy Speed: 16 knots
- Range: 9,000 nm
- Travel Distance: 30 days (without logistic support)
- Service Life: 40 years
- Maritime Features
- Air-mobile operations in Sea State 5
- Loading and unloading operations in Sea State 4
- Flight Deck: 5,440 sqm (6 landing points, supports landing of platforms up to 35 tons)
- Hangar Area: 900 sqm (F-35B, S-70B, AW-149, CH-47, etc.)
- Dock Area: 1,165 sqm (4 x LCM or 2 x LCVP)
- Heavy Load Garage: 1,410 sqm (Tank, AAV, TEU Container, etc.)
- Light Cargo Garage: 1,880 sqm (AAV, ZPT, Container, etc.)
- 12-degree inclined takeoff ramp



## HAZARDOUS SUBSTANCE INVENTORY, INSPECTIONS AND CERTIFICATION

Senior Research and Rule Development Engineer  
**Aslı YALDIZ ÖZTEKİN**

### Works Carried out by Türk Loydu to Prevent Asbestos, PCB and Other Hazardous Substances That May Be Released During Demolition of Buildings and Facilities, and Ship Recycling

The asbestos, PCB and lead containing substances which enter into our lives inside the materials used in many ways in the past in the construction, industry and maritime sectors such as various insulation products, floorings, vinyl floor coverings, surface coatings, parquet flooring adhesives, gaskets, paints, and resins, have become threats in the demolition and recycling processes. The fibers released to air and the wastes dumped to environment when the demolition, teardown, and recycling operations on the buildings that may contain these materials are carried out without taking the necessary measures, cause various health risks for humans, including cancer, and create environmental pollution.

A systematic approach and a control mechanism are required for protection against hazardous substances such as asbestos, all types of which are defined as carcinogenic by the World Health Organization (WHO), and other harmful substances such as PCB, lead, etc., harms of which were clearly revealed. The measures intended for control of harmful substances for the maritime sector were defined in 2009 in the Hong Kong Ship Recycling Convention of IMO, but have not yet entered into force. However, the EUROPEAN UNION SHIP RECYCLING LAW, published by the European Union (EU) (EU Directive 1257/2013), entered into force on 31.12.2013, ensuring that the regional measures are implemented over the years. Türk Loydu provides services for both IMO and EU requirements. For construction and industrial facilities, there are national legislations and limited standards developed by certain countries to the extent of their sensitivity on the subject.



As a country where urban transformation and demolition operations have been carried out intensively in the recent period, the practices in Turkey are mostly intended for banning or disposal of these substances, and the pre-demolition inventory part is open to improvement. For this reason, we have prepared the Guide for Risks of Asbestos and Other Hazardous Substances in Urban Transformation based on the international practices of Türk Loydu, and started to provide services for all concerned parties.

### Maritime Practices

The start of the implementation of EUROPEAN UNION SHIP RECYCLING LAW (EU Directive 1257/2013) will affect both the ships entering EU ports and the recycling facilities. The implementation criterion for the facilities listed in the European List of Ship Recycling Facilities will be a period of 6 months after the maximum ship breaking tonnage (empty ship weight) of the facilities within the last 10 years reach at least 2.5 million LDT. If this date falls before 31.12.2015, the implementation will start on 31.12.2015 at the earliest; if the condition is not met, the implementation will start on 31.12.2018. Pursuant to the relevant EU Law, which is critical for the ship recycling facilities, in order to be able to serve EU flagged ships, the facilities must be inspected, their compliance with the EU law must be certified, and

they must be found eligible to be placed in the 'EU List' as a result of their application to the EU Commission.

The certificate declaring the plant's compliance with the EU law, which is a prerequisite for application, must be given by "independent conformity assessment bodies". According to the guide prepared by the EU Commission, the certification bodies must be type A inspection bodies according to ISO/IEC 17020, and the evaluation must be made by evaluators with at least 5 year experience.

Türk Loydu meets all the conditions determined by the EU Commission for the "independent conformity assessment bodies" with regard to accreditation, international recognition and having a suitably qualified inspector present. There are 18 facilities in the EU countries listed in the EU list, and the total LDT of these facilities is 303,065 tons. Yet, there is no plant that has entered the list from non-EU member states. The criterion for ships is the start of implementation of the EUROPEAN UNION SHIP RECYCLING LAW (EU Directive 1257/2013), and for the ships that call EU ports, early implementation of the Hong Kong Ship Recycling Convention requirements with small changes. Because, as required by law, not only the EU flagged ships, but also the ships that call or anchor the EU ports will be obliged to have a Hazardous Substance Inventory and a "Conformity Certificate" issued after verification. The Inventory and Conformity Certificate requirements will also be applied for existing ships, and the start date of implementation is set as 31.12.2020. The inventory preparation process of the existing ships is carried out as specified in IMO's guides: preparation of visual/sample-based inspection plan, completion of the ship inspection according to this plan, and creation of the hazardous substance inventory. Türk Loydu provides services in this area.

### **Building and Industrial Plant Practices**

Similar hazards regarding hazardous substances are also valid for buildings and industrial plants, and the inventory works that require identification of hazardous substances before demolition or alteration must be completed. Due to the asbestos fibers released to air in the demolition operations carried out without taking the necessary measures during urban transformation, and other hazardous materials dismantled in an uncontrolled manner, people living in the transformation areas are exposed to various health risks, including cancer. Türk Loydu has developed the "Guide for Risks of Asbestos and Other Hazardous Substances in Urban Transformation and Principles of Urban Transformation Conformity Certification" to create a technical basis, which is objective and equivalent to international practices, by taking into account serious public and employee health risks and environmental pollution created by exposure to materials such as asbestos, PCB, lead, etc. in urban transformation process. Our aim is to take MEASURES against the health and environmental risks caused by urban transformation, which affect citizens of all ages and put our future at risk.

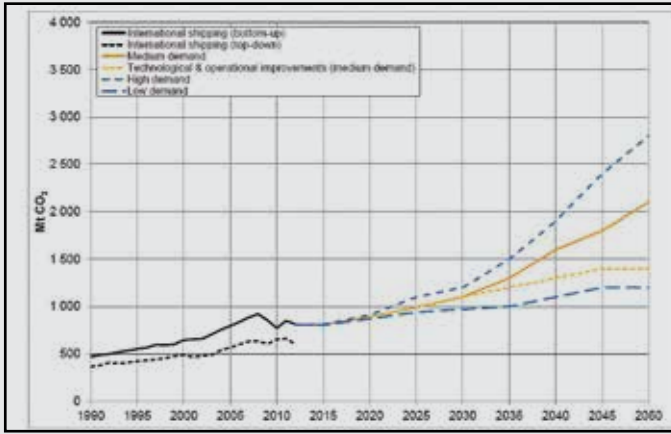
Türk Loydu provides certification through the following basic stages detailed in the "Guide for Risks of Asbestos and Other Hazardous Substances in Urban Transformation and Principles of Urban Transformation Conformity Certification", and continues to provide all services for Municipalities and Turkish Construction Sector, which are particularly sensitive to public health and environment, with its technical specialists:

- Identification of hazardous substances and preparation of the "Hazardous Substances Inventory"
- Conformity inspections of demolition and disposal processes

## IMO FUEL CONSUMPTION DATA COLLECTION

Surveyor  
**Cemil Yücel TALAY**

The main source of emissions from ships is the exhaust gas. Carbon dioxide is the most important greenhouse gas released by ships. Basically, there are different practices on ships intended for monitoring, reporting and verification of CO<sub>2</sub> emission. These practices have been approved by both IMO and the EU commission. The amount of released CO<sub>2</sub> gas naturally depends on the type of fuel used and the amount consumed.



Intermediate emission scenarios show that if necessary measures are not taken, the ship emissions will increase by 200% to 300% compared to 2007 until 2050 as a result of the growth in world trade. The technical and operational measures have been determined as an important potential for reducing the emission of greenhouse gases. As a result of the decisions taken in MEPC 67-68-69-70-71 meetings, the fuel consumption data collection system of the ships have been created.

### IMO DATA COLLECTION SYSTEM (IMODCS)

Based on this rule, 5,000 GT and above ships will collect the consumption data for every type of fuel they use, and the relevant data, including transportation works.

The collected data will be reported to the flag state after the end of every calendar year, and the flag state, determining that the data have been reported in accordance with the requirements, will issue the Conformity Certificate for the ship. Afterwards, the flag states will request these data to be transferred to an IMO Ship Fuel Consumption Database.

The purpose of this data collection system is to establish a global carbon notification system by analyzing if new measures are needed to reduce the greenhouse emissions caused by the international maritime trade and to increase energy efficiency.

This rule is called Marpol Annex VI Regulation 22 A. PART II section will be created in the ship's SEEMP, and the data collection and reporting method will be added.

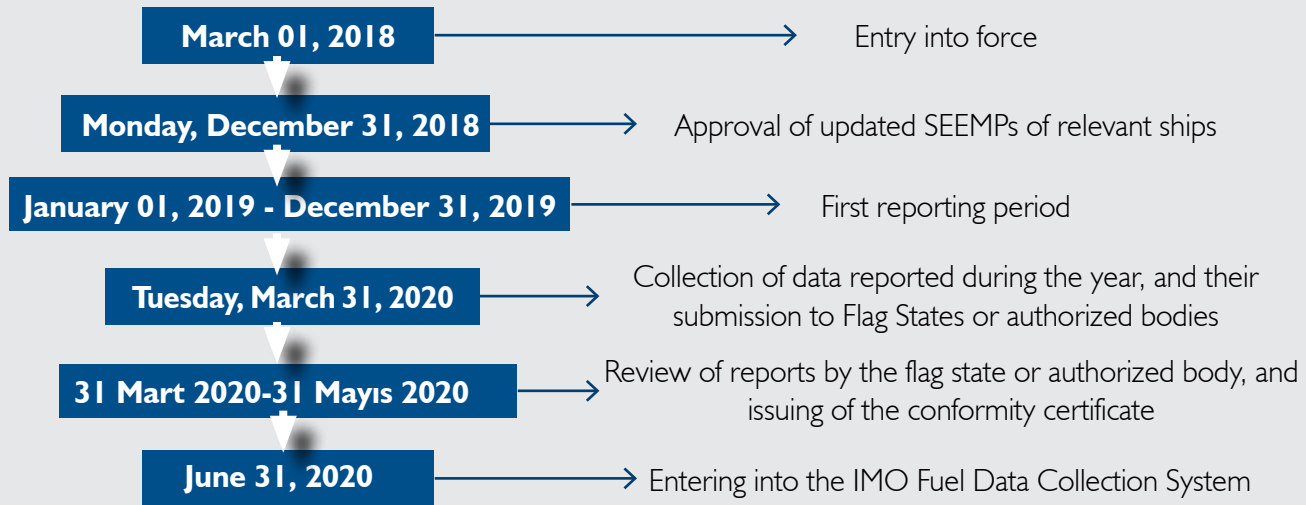
### Information to be sent to IMO Database;

- Ship definition
- Reporting period
- Technical characteristics of the ship
- Fuel consumption data
- Distance traveled
- Time spent at sea

Intermediate emission scenarios show that if necessary measures are not taken, the ship emissions will increase by 200% to 300% compared to 2007 until 2050 as a result of the growth in world trade. The technical and operational measures have been determined as an important potential for reducing the emission of greenhouse gases. As a result of the decisions taken in MEPC 67-68-69-70-71 meetings, the fuel consumption data collection system of the ships have been created.



### IMO Data Collection System Timeline



### Contents of the fuel consumption data collection plan;

- 1) Ship Information
- 2) Revision records
- 3) Fuel-consuming machines
- 4) Emission Factor
- 5) Fuel consumption measurement method

- 6) Distance traveled
- 7) Time spent cruising
- 8) Necessary actions to report the collected data to the competent authority
- 9) Data quality

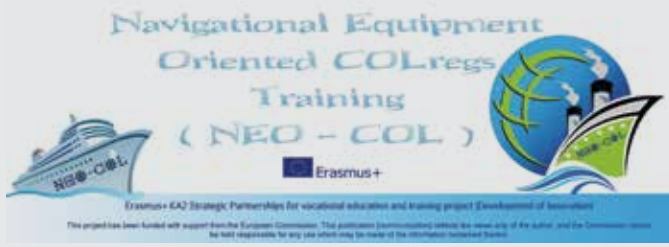
### Reporting format created by IMO;

### STANDARDIZED DATA REPORTING FORMAT FOR THE DATA COLLECTION SYSTEM

Method used to measure fuel oil consumption <sup>9</sup>	Fuel oil consumption (t)	Start date (dd/mm/yyyy)	
		End date (dd/mm/yyyy)	
		IMO number <sup>1</sup>	
		Ship type <sup>2</sup>	
		Gross Tonnage <sup>3</sup>	
		NT <sup>4</sup>	
		DWT <sup>5</sup>	
		EEDI (if applicable) <sup>6</sup> (gCO <sub>2</sub> /t.nm)	
		Ice class <sup>7</sup> (if applicable)	
		Main Propulsion Power (kW)	Auxiliary Engine(s)
		Power output <sup>8</sup> (rated power) (kW)	
		Distance Travelled (nm)	
		Hours underway (h)	
		Diesel/Gas Oil (C <sub>i</sub> : 3.206)	
		LFO (C <sub>i</sub> : 3.151)	
		HFO (C <sub>i</sub> : 3.114)	
		LPG (Propane) (C <sub>i</sub> : 3.000)	
		LPG (Butane) (C <sub>i</sub> : 3.030)	
		LNG (C <sub>i</sub> : 2.750)	
		Methanol (C <sub>i</sub> : 1.375)	
		Ethanol (C <sub>i</sub> : 1.913)	
		Other(.....) (C <sub>i</sub> :.....)	

## NEO-COL (Navigational Equipment Oriented COLREGs Training)

Rule Development and  
Statutory Legislation  
**Bekir SıtkıTÜRKMEN**



This project is carried out under the coordination of Türk Loydu, in partnership with Tuzla District Governorship and with the participation of institutions from Spain, Poland, Germany, and Romania that operate in maritime and software industries, with the support of Turkish National Agency. It will continue for two years within the scope of the Erasmus+ / KA2 Strategic Partnerships for Vocational Education and Training project titled “Navigational Equipment Oriented Colregs Training - NEO-COL and funded by the grant provided by the European Commission. In this project, online training modules and an assessment and evaluation tool will be developed on COLREGs (Legislation for Preventing Collisions at Sea) according to the requirements, and by taking into account the devices installed on different types of vessels and the experiences of various seamen.

We can summarize the basic activities of NEO-COL project as follows:

**1)** Perform a “needs analysis” by using the survey method to identify the differences between theoretical and practical

applications in order to determine the contents of the online training program within the context of COLREGs,

**2)** Develop modern, electronic navigational devices applicable for the vessels that use different navigational equipment, and an “online training module” integrated with realistic practical applications to be used in the trainings for prevention of collisions at sea,

**3)** Develop an “evaluation tool” to assess the skills gained by the users who participated in the online training program, and certify the users.

In this way, it will be able to develop the international NEO-COL online training program and the evaluation tool, which will allow the ship’s crew, who use different navigational equipment such as ECDIS, ARPA or COMPASS, to efficiently implement the Colregs legislation.

The works for this project started at the beginning of 2017, and an official opening meeting was held on February 22, 2017 at Türk Loydu’s Head Office with the participation of senior executives and representatives of project partners where they exchanged views on details including the project coordination, project activities, intellectual deliverables of the project, and distribution of roles.

The draft of a survey study that will reflect the real life



has been created by examination of the accident analysis reports by the representatives of each country, including the collisions in their own regions, in order to create the needs analysis, which is the first leg of the project.

In this draft, real accident scenarios and the most frequently seen articles of COLGERS legislation in collision-based accidents have been examined. In mid-2017 (May 16-17, 2017), the views were stated on the draft survey study in the second project meeting held at Mallorca, Spain and hosted by the Spanish project partner, SeaTech Company, speeding up the works for the final version of the survey. After the meeting, the survey was finalized, published on

the project website ([http:// neo-col.eu/](http://neo-col.eu/)), and announced on social media to increase participation.

We aimed for a survey completed by students and seamen with different experiences and from different countries, thus covering point of views from a broad perspective.

Before the third project meeting, the results of the survey study were analyzed, then evaluated in detail in the project meeting hosted by the project partner from Poland, Danmar Computers, at Rzeszów, Poland on November 9-10, 2017. By the end of 2017, the final point was reached in the analysis of survey studies, and it is planned to begin the preparation of the online training module in 2018.







# INDUSTRY AND CERTIFICATION







**Ayfer ADIGÜZEL**

Industry and Certification Sector Director

“We will continue our sustainable growth by supporting our qualified human resources with digitalization and technological infrastructure investments.”

Conformity Assessment (CA) exists in every area of our personal and social lives ranging from energy to environment, transportation to construction, to machine manufacturing and to banking services. It continues its development as a result of the increase in consumer awareness and tightening of the rules for product safety and performance also in our country, as in the world. Any type of product from ultimate consumer products in our daily life to machines, automobiles and bridges can only gain the reliable product status when they are found standard-compliant and safe for users and the environment as a result of the conformity assessments (test, inspections, certification) made by third party organizations. In the regulated area, the market inspection and supervision performed by relevant public authorities determine if these products meet the legislative requirements. However, the inspection results show that, in order to increase product safety, the products put on the market based on the manufacturer's declaration need to be replaced by the products inspected by independent CA organizations. We see that there is still a long way to go to increase product safety, also in the EU countries. It is of vital importance to take necessary measures by taking into account the hazards created by the products put on the market without adequate inspection in manufacturing stages, as well as similar hazards



regarding imitation products. Primarily in the EU countries, beyond the unfair competition and violation of trademark rights, the serious hazards caused by the imitation products, both manufactured in the domestic market and imported, in terms of safety of life and environment, affect our lives in every aspect. Since the inspection of these products by CA organizations is out of question, it is important that the legal authorities increase their efficiency in import and domestic market supervision, and especially focus on the inspection of products sold through e-commerce.

Even though there is no explicit data regarding the size of the CA market, estimating it based on the GDP size is considered as the most sound approach. Although it is predicted that this number would be approximately 0.2% of GDP, it is believed that at least 30% of this number is already a potential market in our developing country. In other words, especially in the non-regulated areas identified as voluntary, the testing, inspection and certification processes are not carried out by third-party organizations, and these products are put on the market after inspections performed by either second-parties or manufacturers, or without any inspection.

The growth rate of our country in the third quarter of 2017 was announced as 11.1% compared to the same period in previous year, and the growth shows itself in the industrial production, construction, energy and defense industries. A momentum was witnessed in these industries also in the conformity assessment market. But in the upcoming years, especially to prevent the exaggerated growth in the potential market, in other words, to be able to grow by manufacturing safe products conforming to international standards, articles intended for product safety must be added to technical specifications, and accredited CA bodies must take active roles in production processes and certify product conformities. In this way; the product safety chain will be secured in the circle ranging from manufacturer to CA organization and the accreditation body, the products will be insured with lower policies, and in case of occurrence of a risk, resorted to the relevant party at fault. After all, this is the purpose of accreditation.

In parallel to the developments in the field of CA in our country and the world, our company achieved a record growth above 35% compared to the previous year in 2017. Our objective in the upcoming years is to increase the variety of the specialties required by the developing market,



and to further strengthen our technological infrastructure and organizational structure. As we all know; in the age of new industry that has come into our lives as industry 4.0 with the technological revolution; the period of big data, artificial intelligence, 3D printers, Internet of things, communicating smart systems, data-aware decision making,



and environmentally sensitive production started. In a period where database-based and technological infrastructure processes advance with an incredible speed, and certain professions are replaced by artificial intelligence, conformity assessment must be paralleled to the technological advancement and digitalized. At this point, well aware of the requests and processes of our customers, we improve our digitalization processes according to the requirements, and increasingly continue our investments in this field.

2017 was a year when we spent many hours in order to achieve our growth objectives in line with the needs and expectations of our customers with our 56-year experience in the national and regional markets. We continued to develop new products while making efforts to put our existing products on larger markets. We expanded our range of services in our sectors, primarily energy, construction, manufacturing, chemistry, transportation, and logistics, and extended our geographical service areas, local and abroad. The number of our foreign projects increased in 2017.

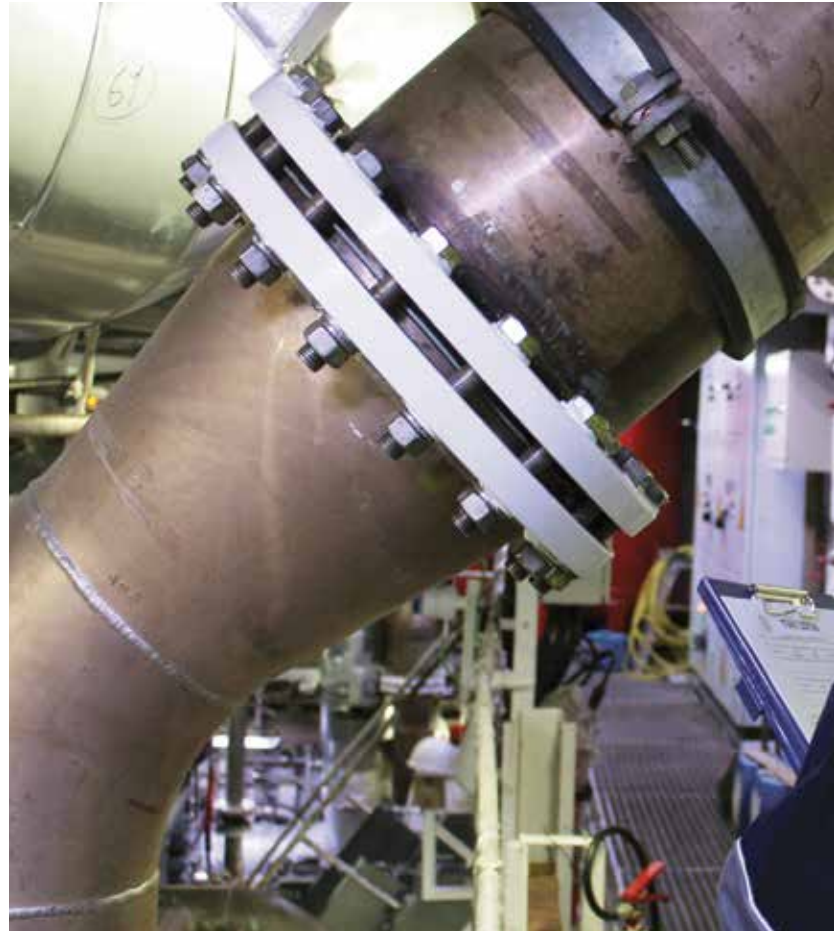
We continued our services in a geographical distribution ranging from China to Turkmenistan to Libya to Dubai. We value international cooperation in line with our target to become a regional power in industrial CA services. To penetrate into the potential market by following the developments in international market in the field of conformity assessment and to closely follow the advancements in the industry, we participated in the 57th General Assembly and Technical Committee meetings of the International Confederation of Inspection and Certification Organizations, "CEOC International", held in Lyon between May 27 and 30, 2017. We are a member of CEOC International, which has 31 members from 19 countries. By participating in the technical committees of CEOC International, which is one of the most important umbrella organizations of the CA sector.

To touch briefly on the services we added to our portfolio in 2017 as new activities; we initiated our process to provide services in the field on nuclear energy by signing a trilateral cooperation protocol with Turkish companies and TÜV Nord Germany, the internationally-recognized German conformity assessment body that operates in this field, in order to provide the conformity assessment (test, inspection and certification) and training services according to the nuclear standards and legislations created for safe installation and operation of Akkuyu and Sinop nuclear power plants under construction in our country.

We signed cooperation agreements with EU origin companies to provide conformity assessment services for the railway investments rapidly increasing in our country in recent years. As our country has not yet completed the EU statutory legislation alignment in this process and started the appointment of national Approved Bodies, we will continue our cooperation with this type of organizations until these appointments, localize the necessary specialties within our organization and offer them to our industry. Our purpose is to provide services to our national industry in the railway sector in a broad range from infrastructure to signalization, machinist trainings, and TSI certification.

We contributed to the provision of necessary data to create the carbon emission inventory of our country by providing verification services to nearly 50 organizations with our "Verifying Body" authorization given by the Ministry of Environment and Urbanization to offer verification services for the greenhouse gas emission reports in industrial plants. We will continue providing this service within the scope

of our authorization. We prepared guide documents that can be used by all parties, primarily the public authorities and local administrations, for identification of asbestos and other hazardous substances released from buildings during the demolition process, their inventory, and safe disposal, intended for the protection of environment and human health in our country, which has almost turned into a large construction site within the scope of urban transformation, and we provided inspection and reporting services within this scope. By providing this service, we believe that we have also fulfilled an important social responsibility regarding the protection of environment and human health. We believe that our inspection and reporting services intended for the identification, inventory and safe disposal of asbestos and other hazardous substances in buildings, constitute a CA service with extremely critical importance for raising healthy generations. We believe that if the demand in this field is increased, primarily by our local administrations, the awareness of every section of the society will also increase. As per additional article 1 added to the law no. 5544 on 23.04.2015, the "VQA Vocational Qualification Certificate" was made mandatory on 26.05.2016 for the occupations listed among the hazardous and highly hazardous



occupations, national qualifications of which were published by the Vocational Qualifications Authority (VQA), and those mentioned in the communiqués published by the Ministry of Labor and Social Security. With our personnel certification services in 10 different areas of profession, new occupational groups were added to the construction sector; primarily the industrial pipe installer, wooden mold maker, and gypsum board applicator, and we have reached the final stage in obtaining authorization from VQA. By the beginning of 2018, we will begin offering services also in the new occupational groups as a certification body authorized by VQA. Within the scope of our existing services, we signed important agreements in 2017 to provide turnkey CA services in mining and industrial production facility investments. One of these projects is the copper ore extraction and processing mine of Acacia Maden İşletmeleri A.Ş., which is under construction in Kastamonu Hanönü. In 2017, we continued to our structural steel control projects, which constitute a major part of our activities. We have numerous stadium, mall, cultural center, and steel bridge projects in progress. These include; Spor Toto Akhisar, Giresun Çotanak, Çorum, Hatay stadiums, Gaziantep Iconovo Mall, THY New Simulation Center and Kömürhan Bridge.



As an example of our CA activities on buildings, we can give the 3rd Airport project. Our purpose is to allow realization of reliable products and facilities for investors, contractors, operators and insurance companies within the chain that ranges to the end user, by controlling the compliance of high-budget projects with long design lives to the specifications. We completed the conformity assessment of more than 600 industrial products, primarily pressurized containers, boilers, heat exchangers, LPG and LNG tanks, and personnel certification of nearly 4,000 persons. We aim to increase this number and variety in the new year. Since 2004, we have been providing services with our competent auditors in the Project for Accreditation of Chambers and Exchange Commodities realized in 2002 by TOBB with the aim of branding the chambers and exchange commodities on local, regional, national and international platforms. The number of chambers and exchange commodities accredited in 2017 is 30, reaching the total number of 256. With our quality service, we have made Türk Loydu widely known, and contributed to the strengthening of its brand value. In parallel to the accreditation project, we conducted management system certification (ISO 9001, ISO 14001, ISO 10002, ISO 27001) audits in Chambers and Exchange Commodities, and ensured that 57 Chambers and Exchange Commodities are certified by Türk Loydu.

We owe the variety, development, and continuity of our CA services in the industrial sector to our qualified human resources, customer oriented business culture, making the necessary investments for continuous improvement, and above all, the confidence placed by our customers in us.

In 2018, with our team behind our successes with their belief in our goals and their efforts, we aim to strengthen the brand value of Türk Loydu further in line with our strategic objectives, vary our product range, and continue to work for our goal to become a power in our country and region by becoming popular in the market and offering the conformity assessment services needed in our sector as well as innovative services.

On this opportunity, I would like to thank very much all my co-workers for their belief in our goals and their efforts to achieve them. I also would like to express my gratitude to our customers and partners who make us stronger with their confidence in Türk Loydu's brand value, contribute to our development, and do not deny their support to us, and I wish to continue producing together in the new year.



### ENERGY PLANT INSPECTION ACACIA GÖKIRMAK COPPER PROJECT

The Gökirmak Copper project developed by Acacia Maden İşletmeleri A.Ş. is within the borders of Hanönü district of Kastamonu province.

Within the scope of Gökirmak Copper Project, the aim is to start ore production in the 2nd quarter of 2018 and continue the concentrated ore production. It is planned to produce 2,000,000 tons of raw copper ore annually. Within this frame, the construction and installation operations continue for the plant to be operated with modern equipment. In addition, the waste storage facility construction and the overburden operations in the pit area continue as planned. 1.28 million tons of concentrated production is targeted during the total mine life, which is planned to last approximately 12 years. Within the scope of the project, the Inspection and Test Plan (ITP) is specified before manufacturing and installation for construction, maps, plant manufacturing, equipment, piping, tanks, and steel constructions, and 3rd party inspection services are provided.



### INDUSTRIAL PLANT INSPECTION KARABİGA THERMAL POWER PLANT PROJECT

When the thermal power plant project under construction in Karabiga, Çanakkale by CENAL Elektrik Üretim A.Ş., is completed, it will have the ultra supercritical pulverized coal technology. It will have an installed power of 2x660 MWe, a production capacity of 9,900 GWh/year based on imported coal. It is one of the few projects built with the ultra supercritical pulverized coal technology.

Within the scope of the project, 3rd party inspection services are provided for the inspection and conformity assessment of equipment, steel and piping manufacturing. The project started in November 2015, and completed at the end of 2017.



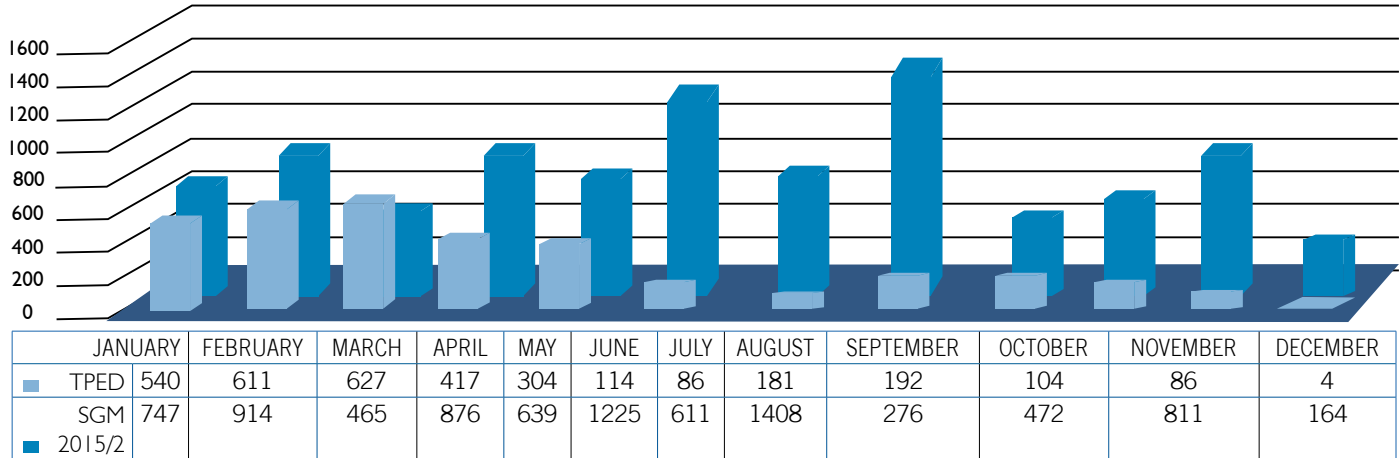
### ENERGY PLANT INSPECTION FACT FINDING PROJECT FOR ÇAN 2 THERMAL POWER PLANT

When the thermal power plant project under construction in Çan, Çanakkale by Çan Kömür & İnşaat A.Ş., is completed, it will be powered by domestic coal in subcritical pulverized coal boilers. The thermal power plant with an installed power of 340 MWm/330 MWe and powered by domestic coal, is targeted to be commissioned in the second part of 2018.

Within the scope of the project, Türk Loydu provides third party inspection services for the control and conformity assessment of the pressurized containers and piping reinstallation operations.



Number of Periodically Controlled Pressurized Equipment



## PERIODIC CONTROL OF PORTABLE PRESSURIZED

Türk Loydu was appointed as a type A inspection body according to ISO/IEC 17020 in March 2016 by the Ministry of Science, Industry and Technology, for the periodic inspections of cylinders without  $\pi$  or CE marking, manufactured before 01.07.2005 and after 01.01.1981 within the scope of the “Communiqué on Procedures and Principles for Filling and Periodic Inspections of Pressurized Gas Cylinders” dated January 22, 2015 and numbered SGM-2015/2.

Within this scope, active services were provided to 42 companies, and 8,608 cylinders without  $\pi$  marking were inspected and reported in 2017.

We continued to provide services with our expert staff and local resources within the frame of our cooperation with a company authorized as Notified Body by EU within the scope of Transportable Pressurized Equipment Directive (2010/35/EU) – TPED. By the end of 2017, periodic controls of more than 3,200 cylinders with  $\pi$  marking were completed. In addition, periodic control inspections of cylinders were performed in 21 filling companies within the scope of 2010/35/AT regulations, and as a result of the inspections, internal inspection certificates were issued.



## RISK ASSESSMENT

Within the scope of Prevention of Major Industrial Accidents and Mitigation of Their Impacts (SEVESO Directive), and Safety Report and BKÖP (Major Accident Prevention Policy) inspection and reporting services, Türk Loydu provides the following services:

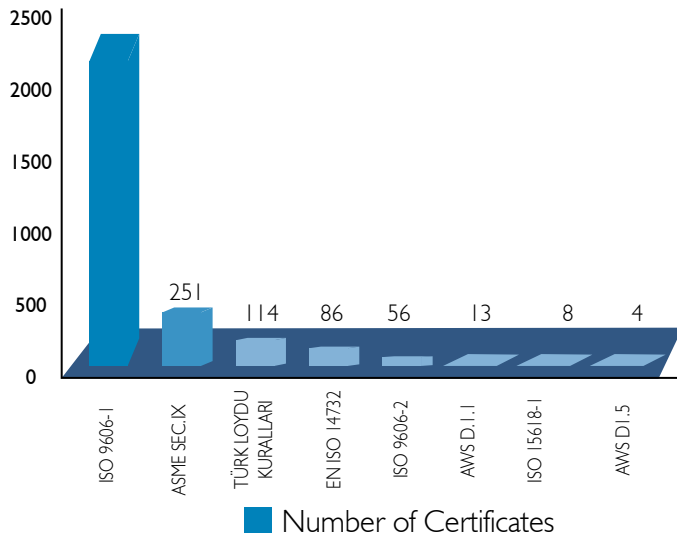
- Review of classification of hazardous chemicals (in accordance with CLP);
- Chemical Exposure assessment (ILO COSH method);
- Explosive atmosphere classification and preparation of Explosion Protection Document within the scope of ATEX;
- P&ID drawings and controls;
- Process hazard analysis (HAZOP) review;
- Review of the determination and grouping of hazardous equipment in the process (Dow F&E index);
- Reliability Centered Management (RCM) review;
- Review of Risk Based Control (RBI) methods;
- Review of root causes and result analyses of major accident scenarios using the BOW TIE method;
- LOPA analysis review;
- Functional Safety (SIS, SIL, SIF and ESD design) review;
- Safety Method System review;
- Result analysis and Individual and Social Risk (F-N Curve) review;
- Modeling (Breeze)
- Preparation of the Safety Report.

## PERSONNEL CERTIFICATION

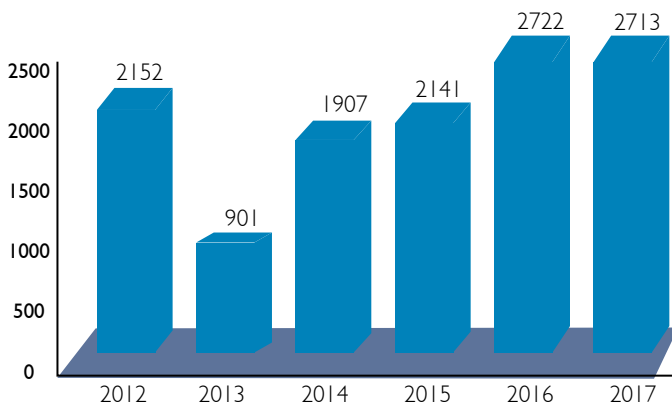


Türk Loydu produces complete solutions for the needs of its customers with its dynamic structure and expert staff according to the design and production standards and in parallel to the varying and ever-developing technology. Within this scope, we provide welded manufacturing personnel certification services for the industry in a broad range, primarily for pressurized container manufacturing, steel construction, energy sector, defense industry, etc.

Number of Standard-Based Certificates in 2017



Türk Loydu certified a total of 2,713 welders in 2017. The distribution for the last five years is shown in the chart below.



## VOCATIONAL QUALIFICATION CERTIFICATE

As per additional article I added to the law no. 5544 on 23.04.2015, the "VQA Vocational Qualification Certificate" was made mandatory on 26.05.2016 for the occupations listed among the hazardous and highly hazardous occupations, national qualifications of which were published by VQA, and those mentioned in the communiqués published by the Ministry of Labor and Social Security.

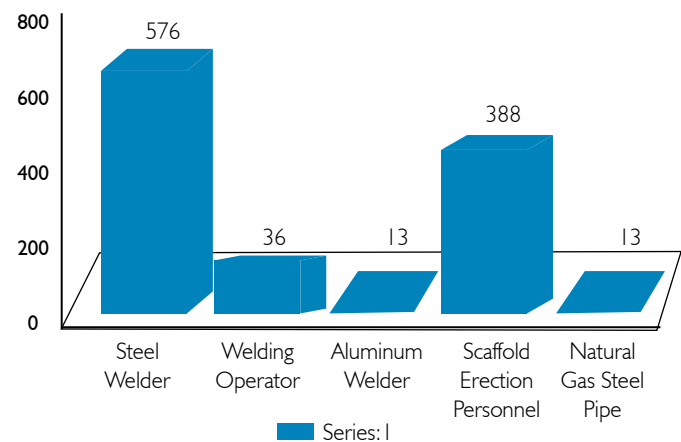


Türk Loydu Conformity Assessment Corp. is a Certification Body authorized by the Vocational Qualifications Authority (VQA), which provides exam and certification services according to national qualifications.

Exam and certification activities are carried out in our exam center and customer premises according to national qualifications.

- 11UY0010-3 Steel Welder
- 11UY0016-4 Welding Operator
- 11UY0033-3 Natural Gas Steel Pipe Welder
- 09UY0001-3 Plastics Welder
- 12UY0056-3 Scaffold Erection Personnel

Number of National Qualification Certificates in 2017





As a Notified Body authorized by the Vocational Qualifications Authority, Türk Loydu performed a total of 1,026 vocational qualification certifications in 2017.

## **INDUSTRIAL CERTIFICATION PRESSURIZED EQUIPMENT**

Within the scope of “Product Certification”, which is one of the main components of our conformity assessment services, we have been carrying out boiler, pressurized container and industrial product certification activities for many years.



The conformity assessment and certification of products are performed according to EU's new approach directives when CE marking is required. For the product groups or markets for which CE marking is not mandatory, the “Product Certificate” is issued by following the procedures of Türk Loydu, and securing the design, production, installation and commissioning processes.

Unless otherwise stated, boilers (steam boilers, hot water boilers, hot oil boilers, etc.) are inspected and certified according to EN 12953, EN 12952, EN 303, and TS 497 standards.

Unless otherwise stated, pressurized containers (LPG, LNG, air, nitrogen, oxygen tanks etc.) are inspected and certified according to AD 2000, EN 13445, ASME Sec. VIII Div. I, etc. standards.

Primary stages of inspection in product certification can be

summarized as follows:

- Review and approval of design and strength calculations
- Conformity assessment of materials and their certificates
- Conformity assessment of welder certificates
- Conformity assessment of welding method (WPS, PQR) approvals
- Interim manufacturing inspections (cutting, assembly, measurement, dimension etc. inspections)
- NDT applications and evaluation in welded joints
- Final inspection and hydrostatic pressure test
- Review and approval of the product's technical file
- Issuing of certificate

Our agreement and cooperation with an institution authorized as a Notified Body by EU, which started in 2016, still continue to provide uninterrupted service to our customers due to the suspension of the authorizations of the appointed national Notified Bodies because of the not-yet-completed negotiations between our country and the EU Commission in the process for adaptation of the revised Pressurized Equipment Directive (2014/68/EU) to our national legislations. Also, within the scope of our cooperation, we provide  $\pi$  marking conformity assessment services according to the Transportable Pressurized



Equipment Directive (TPED) (2010/35/EU), for which the national Notified Body authorization is still not available in our country.

## **FIRE PROTECTION SYSTEMS**

The conformity assessment of fire protection systems gains increasing importance in industrial and domestic buildings. Türk Loydu performs its conformity assessments in this field according to the ISO/IEC 17020 standard as an accredited Type A Inspection Body.

The design, hydraulic calculation, installation checks, performance and function tests are performed according



to “Turkey’s Regulation on Fire Protection” and the relevant standards.

A “System Approval Certificate” is issued if the system is deemed suitable by Türk Loydu. The systems assessed in the field of fire protection are summarized below:

- Water, foam, automatic gas fire extinguishing systems
- Smoke removal and escape stairs pressurizing systems
- Detection, alarm, emergency lighting systems
- Fire-protection water storage tanks
- Assessment of fire scenarios

Numerous projects were realized in 2017 in the field of conformity assessment of fire protection systems, primary of which are listed below. Turkcell Information Processing Center, Hilton Izmir, Mercedes Benz Türk A.Ş. factories, Balıkesir Metropolitan Municipality, İçdaş.

### STORAGE TANKS

Türk Loydu performs the periodic inspections of aboveground tanks, both new and in manufacturing, installation and service, within the scope of API 650 and API 653, with its expert staff and under the accreditation umbrella within the scope of its “API 650 Authorized Inspection Agency” competence on atmospheric aboveground storage tanks and the ISO/IEC 17020 standard. During the design controls process, the conformity of storage tanks to API 650 standard is assessed by taking into account the earthquake calculation

and calculation of wind and snow loads. The inspections are performed by expert plan control engineers, and a customized version of Intergaph e-tank computer program is used. Special construction analyses are performed using SAP-2000 and ANSYS finite elements method.

The scope of inspections performed during the manufacturing of Storage Tanks is as follows:

- Material, manufacturing, installation inspections according to the approved project
- Inspection of welder certificates
- Inspection of welding method approvals (WPS&PQR)
- Inspections during pre-manufacturing in the factory (bending, etc.)
- Perpendicularity, diameter, ovalness checks of tanks
- Visual inspection
- NDT applications and evaluation of reports
- Final inspection and tests
- Issuing of the certificate for the storage tank

In 2017, conformity assessments were performed for 8 storage tanks with various dimensions and capacities from 45 m<sup>3</sup> to 600 m<sup>3</sup>. Our references include BP GAS and KANSAI ALTAN.



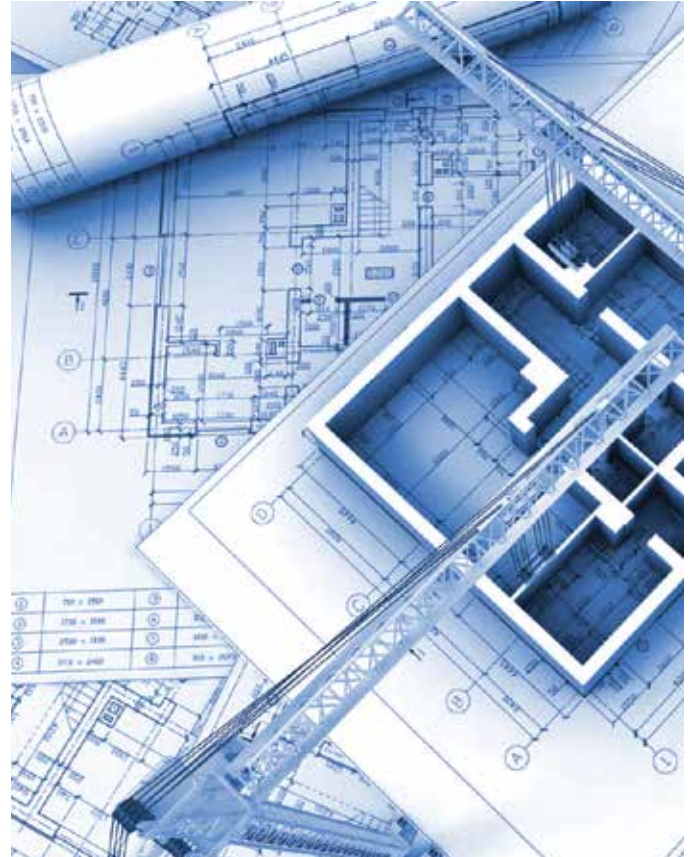




## BUILDING INSPECTION SERVICES

As a Type A Inspection Body accredited according to EN ISO/IEC 17020 standard, Türk Loydu performs manufacturing and installation inspections and periodic inspections of buildings, and provides third party inspection services in industrial plants according to statutory legislations, standards, the Regulation on Design, Calculation and Building Principles of Steel Constructions, and customer specifications. It provides control and certification services for conformity of turnkey delivery according to standards, statutory requirements and customer specifications. The ground inspections of steel, reinforced concrete, composite, etc. buildings such as airports, residences, sports complexes, stadiums, shopping malls, business centers, cultural centers, skyscrapers, platforms used in petroleum and natural gas production, bridges, and viaducts, and inspections of electricity, welded manufacturing, fire protection systems, heating, cooling and ventilation (HVAC) systems in all stages, are performed by the experienced inspectors of Türk Loydu.

The important projects we realized in 2017 within the scope of building inspection services are listed on the side column.



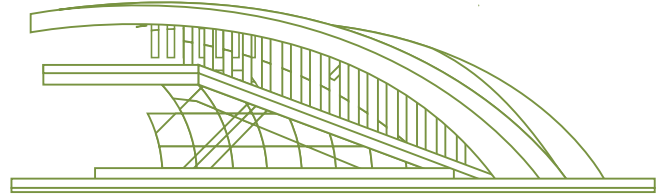


## STEEL CONSTRUCTION MANUFACTURING AND INSTALLATION INSPECTIONS

### SPOR TOTO AKHİSAR STADIUM PROJECT

The Akhisar Stadium built by the Akhisar Municipality has a 12,000-seat capacity. The inspection of the manufacturing and installation of a total of 1,850 tons of steel was performed by TÜRK LOYDU according to the steel construction specifications, and EXC3 execution class of EN 1090-2 standard. The conformity assessment was performed in all stages of manufacturing and installation beginning from the material procurement process according to the Inspection and Test Plan (ITP) specified for the project before manufacturing. The construction site installation works were completed in November 2017.

PROJECT DETAILS	
Employer	AKHİSAR MUNICIPALITY
Location	Akhisar- Manisa
Ground	Grass
Seating	All seated
Ground type	Hybrid Grass
Capacity	12,000
Total Area of Construction	52 donums (approx. 52,000 sqm)
Period	2017
Construction Time	18 months
Technical Information	1,850 tons
Scope of Inspection	WPS-PQR, Welder Certification
Inspection Standard	Inspection of steel manufacturing and installation according to the relevant standard and ITP
Cost	EN 1090-2 EXC 3
	TRY 50 million



### TURKISH AIRLINES NEW SIMULATION CENTER

The T.H.Y. A.O. Simulator Building Construction Project, which is in progress in Florya, Istanbul, has 18 simulators inside a total closed area of 30,000 sqm. This project, which moved THY A.O. to the first place in the world in terms of pilot simulation training capacity, is an important investment both for the sector and our country. In this building, concrete-steel carcass construction has been used one within the other for bearing system and the building has been equipped with the latest electromechanic technology and has functional and impressive design in visual and architectural sense. The weight of steel used within the scope of project is nearly 2,000 tons. The structural steel part of the project started in May 2016, and its conformity assessment was made by TÜRK LOYDU according to EXC2 execution class of EN 1090-2 standard.



PROJECT DETAILS	
Customer	THY A.O.
Location	Istanbul, Turkey
Scope of Inspection	Steel construction manufacturing and installation inspection
Period	2016-2017
Project Tonnage	2,000 tons
Inspection Standard	EN 1090-2 EXC 2

## MALL OF ANTALYA PROJECT

The Mall of Antalya was constructed as a Shopping Mall project on an area of nearly 42,000 sqm within the borders of Antalya Kepez Municipality with an investment cost of nearly TRY 134.2 Million.

Manufacturing and installation of a total of 4,000 tons of steel were completed in the project, and the conformity assessment was performed by TÜRK LOYDU according to the steel construction specifications, and EXC3 execution class of EN 1090-2 standard. The Inspection and Test Plan (ITP) was specified for the project before manufacturing, and the standard conformity assessments were performed in all stages of manufacturing and installation, beginning from the material procurement process. The construction site installation works were completed and the mall was put into service in May 2017.

PROJECT DETAILS	
Employer	TORUNLAR GYO
Location	Antalya, Turkey
Scope of Inspection	Steel construction manufacturing and installation inspection
Period	2016-2017
Project Tonnage	4,000 tons
Inspection Standard	
Investment Cost	TRY 134.2 million



## ICONOVA PROJECT

In the project, which is an investment made in Gaziantep, the conformity assessment of the manufacturing and installation of a total of 4,000 tons of steel was performed by TÜRK LOYDU according to the steel construction specifications, and EXC3 execution class of EN 1090-2 standard. The Inspection and Test Plan (ITP) was specified for the project before manufacturing, and the standard conformity assessments were performed in all stages of manufacturing and installation, beginning from the material procurement process.



PROJECT DETAILS	
Employer	HALDIZ İNŞAAT
Location	Gaziantep, Turkey
Scope of Inspection	Steel construction manufacturing and installation inspection
Period	2015-2017
Project Tonnage	4,000 tons
Inspection Standard	
Investment Cost	TRY 134.2 million

## YILDIZ ENTEGRE COLD ROLLING MILL PROJECT

The cold rolling mill and galvanizing plant, built on an area of 500,000 sqm in İzmit- Alikahya Organized Industry Zone, contains a Continuous Pickling Line, a Vertical Hot-Dip Galvanizing Line, a Bell-Type Annealing Furnace and a Tandem Line. Cold rolled, galvanized, and annealed rolls, pickled in the continuous pickling line with an annual capacity of 1,500,000 tons, will be produced. In the project, the conformity assessment of the manufacturing and installation of a total of 15,000 tons of steel is performed by TÜRK LOYDU according to the steel construction specifications, and EXC3 execution class of EN 1090-2 standard. The conformity assessment is carried out in all stages of manufacturing and installation, beginning from the material procurement process, according to the Inspection and Test Plan (ITP) specified for the project before manufacturing.



PROJECT DETAILS	
Employer	YILDIZLAR YATIRIM HOLDİNG
Location	İzmit, Turkey
Scope of Inspection	Steel construction manufacturing and installation inspection
Period	2017- in progress
Project Tonnage	15,000 tons
Inspection Standard	
Investment Cost	TRY 134.2 million

## 3RD AIRPORT PROJECT

The construction of Istanbul New Airport Project started in 2013, and when completed, it will be the largest airport of the world with an area of 76.5 km<sup>2</sup>, terminals with a capacity of 200 million passengers, and 6 independent airfields. The project consists of four stages. At the first stage, the international terminal, port building and ATC tower are planned to be completed and put into service in 2018. The conformity assessment of the production and installation of roof and facade systems of the international terminal, and the port buildings and the ATC tower built at the first stage, was made by TÜRK LOYDU based on the technical specifications. Within the scope of the service started in July 2016, the conformity assessment of the roofing manufacturing of port-I building, and steel anchorage installation of the facade bearer in port-I and terminal buildings, was completed. In 2017, the factory inspections of the roof and facade production for Port 1, Port 2 and Port 5 buildings, the steel anchorage installation for the facade bearer in terminal building, and the steel production for the rear facade bearer in terminal building, were performed. The conformity assessment services provided in the project will continue in 2018.



PROJECT DETAILS	
Employer	IGA CONSORTIUM
Location	Istanbul, Turkey
Scope of Inspection	Third Party Inspection of Steel Roof and Facade
Period	2016 – in progress
Inspection Standard	EN 1090-2 EXC 3, IGA technical specifications
Investment Cost	EUR 22 billion and 152 million





## ERDEMİR 2ND GALVANIZATION LINE PROJECT

The project includes the manufacturing and installation of 3,000 tons of steel in total, and the conformity assessment is performed by TÜRK LOYDU in all stages according to EXC-3 execution class of EN 1090-2 standard.

PROJECT DETAILS	
Employer	PARTNER TEKNİK
Location	Karadeniz Ereğli, Zonguldak, Turkey
Scope of Inspection	Inspection of Manufacturing and Installation of Technological Steel and Main Building Steel Construction
Period	2016 – in progress
Project Tonnage	3,000 tons
Inspection Standard	EN 1090-2 EXC 3
Investment Cost	EUR 50 million



## KÖMÜRHAN BRIDGE

A new road construction project with a 2x2 lane and a length of 5,155 m in total, including construction of a Tunnel and the “Cable-Stayed Tensile New Kömürhan Bridge”, which provides passage over Karakaya Dam Lake (Firat River) on Malatya-Elazığ State Highway. With this project, a new bridge with a parallel length of 660 m in total and a modern state highway nearly 2.4 km long will be constructed to replace the existing 1x1 lane road with low standards (small curve diameters, too many curves). The new Kömürhan Bridge in the project will be a “Cable-Stayed Tensile Bridge”, as called in the international literature. The conformity assessment of the manufacturing and installation of nearly 20,000 tons of steel used within the scope of the project, is being performed by TÜRK LOYDU according to EXC-4 execution class of EN 1090-2.

PROJECT DETAILS	
Employer	YÜKSEL PROJE
Location	Malatya, Turkey
Scope of Inspection	Inspection of Manufacturing and Installation of Technological Steel and Main Building Steel Construction
Period	2016 – in progress
Project Tonnage	20,000 tons
Inspection Standard	EN 1090-2 EXC 4
Investment Cost	TRY 200 million



## GİRESUN ÇOTANAK STADIUM PROJECT

The Giresun Çotanak Stadium being built by TOKİ has a capacity of 22,000 seats. The conformity assessment of the manufacturing and installation of a total of 3,500 tons of steel is being performed by TÜRK LOYDU according to the steel construction specifications, and EXC3 execution class of EN 1090-2 standard. The conformity assessment is being performed in all stages of manufacturing and installation beginning from the material procurement process, according to the Inspection and Test Plan (ITP) specified for the project before manufacturing.

PROJECT DETAILS	
Location	GİRESUN, TURKEY
Employer	Siyah Kalem
Ground	Grass
Seating	All seated
Capacity	33.000
Total Area of Construction	120 donums (approx. 52,000 sqm)
Construction Time	24 months
Project Tonnage	3,500 tons
Scope of Inspection	Inspection of Precast Stairs, Electricity, HVAC, according to ITP and the standards related to the manufacturing and installation of Reinforced Steel and Steel Construction
Period	2017- in progress
Inspection Standard	EN 1090-2 EXC 3
Investment Cost	TRY 180 million

In addition, the precast manufacturing inspections are performed within the scope of the conformity assessment. The construction site installation works are planned to be completed in July 2018.



## ÇORUM STADIUM PROJECT

The Çorum Stadium being built by the Çorum Municipality has a 15,000-seat capacity. The inspection of the manufacturing and installation of a total of 2,800 tons of steel is being performed by TÜRK LOYDU according to the steel construction specifications, and EXC3 execution class of EN 1090-2 standard.

The conformity assessment is being performed in all stages of manufacturing and installation beginning from the material procurement process, according to the Inspection and Test Plan (ITP) specified for the project before manufacturing. The construction site installation works are planned to be completed in July 2018.



PROJECT DETAILS	
Location	ÇORUM, TURKEY
Employer	ÇAKIR İNŞAAT
Host	Çorum Belediyespor
Ground	Grass
Ground Type	Natural Turf
Seating	All seated
Capacity	15,000
Total Area of Construction	72 donums (approx. 52,000 sqm)
Project Tonnage	2,800 tons
Scope of Inspection	WPS-PQR Welder Certification Inspection of steel manufacturing and installation according to the relevant standard and ITP
Period	2017-
Inspection Standard	EN 1090-2 EXC 3
Cost	TRY 80 million



## HATAY STADIUM PROJECT

The Hatay Stadium being built by TOKİ has a capacity of 25,000 seats. The inspection of the manufacturing and installation of a total of 2,700 tons of steel is being performed by Türk Loydu according to the steel construction specifications, and EXC3 class of EN 1090-2 standard. The conformity assessment is being performed in all stages of manufacturing and installation beginning from the material procurement process, according to the Inspection and Test Plan (ITP) specified for the project before manufacturing. The construction site installation works are planned to be completed in June 2018.

PROJECT DETAILS	
Employer	SERTKA İNŞAAT
Location	Hatay, Turkey
Ground	Grass
Ground Type	Natural Turf
Seating	All seated
Capacity	25,000
Total Area of Construction	160 donums (approx. 160,000 sqm)
Construction Time	18 months
Project Tonnage	2,700 tons
Scope of Inspection	WPS-PQR, Welder Certification
Period	Inspection of steel manufacturing and installation according to the relevant standard and ITP
Inspection Standard	2017- in progress
Cost	EN 1090-2 EXC 3
	TRY 118 million



## ADANA STADIUM PROJECT

The Adana Stadium being built by TOKİ has a capacity of 33,000 seats. The inspection of the manufacturing and installation of a total of 3,500 tons of steel is being performed by TÜRK LOYDU according to the steel construction specifications, and EXC-3 execution class of EN 1090-2 standard. The conformity assessment is being performed in all stages of manufacturing and installation beginning from the material procurement process, according to the Inspection and Test Plan (ITP) specified for the project before manufacturing.



PROJECT DETAILS	
Employer	ALKATAŞ-ILGAZLAR
Location	Adana, Turkey
Ground	Natural turf
Seating	All seated
Capacity	33,000
Total Area of Construction	102 donums (approx. 52,000 sqm)
Dimensions	105m x 68m
Seats Reserved for Guests with Disabilities	Available
Camera System	Available
Construction Time	18 months
Project Tonnage	3,500 tons
Scope of Inspection	Steel construction manufacturing and installation inspection
Period	2017- in progress
Inspection Standard	EN 1090-2 EXC 3
Cost	TRY 106 million



## DR. LÜTFİ KIRDAR KARTAL TRAINING AND RESEARCH HOSPITAL PROJECT

Dr. Lütfi Kırdar Kartal Training and Research Hospital, which will be built in Kartal, Istanbul on a floor area of approximately 55,000 sqm and a closed area of 300,000 sqm, is a multi-story, reinforced concrete building with a bed capacity of 920, a seismic isolation system, as well as a sophisticated electromechanical system including elevators, and heating, ventilation and purification systems. The conformity assessment of the manufacturing and installation of a total of 2,000 tons of steel in the project is being performed by Türk Loydu according to the steel

PROJECT DETAILS	
Employer	KALYON İNŞAAT
Location	Istanbul, Turkey
Scope of Inspection	Steel Manufacturing and Installation Inspection
Period	2016- in progress
Project Tonnage	2,000 tons
Inspection Standard	EN 1090-2 EXC 3

construction specifications, and EXC3 execution class of EN 1090-2 standard.



## CONSTRUCTION PRODUCTS (305/2011/EU Construction Products Regulation)

The products within the scope of 305/2011/EU Construction Products Regulation, which is in force in Turkey and the EU countries, must be put on the market with the “CE” marking. To be able to put the products on the market with the “CE” marking, a factory production control system must be established by the manufacturers in accordance with the relevant standard, the products must be manufactured according to this system and certified by a Notified Body. The certification bodies may assess the risks of the products

in scope in terms of safety of life and property, and guarantee that they are produced under controlled, sustainable and safe conditions.

The organizations that provide certification services must be authorized as a Notified Body within the scope of 305/2011/EU Construction Products Regulation, listed on the official web page of EU (NANDO), and authorized as an Accredited Body according to the EN ISO/IEC 17065 standard. TÜRK LOYDU has been listed on the official web page of EU (NANDO) as a Notified Body with ID number 1785 within the scope of 305/2011/EU Construction Products Regulation, and provides Factory Production Control Certification services for the organizations that manufacture steel and aluminum constructions, steel profiles, welding electrodes, mechanical fasteners, and rolled steel sheets.



As a Notified Body, Türk Loydu certified the Factory Production Control of the following companies within the scope of structural metal products and secondary members according to 305/2011/EU Construction Products Regulation.

Within the scope of 305/2011/EU Construction Products Regulation, Türk Loydu carries out the Factory Production Control Certification activities for the products listed in below table.

<b>Construction Products Regulation (305/2011/EU)</b>	
Product	Standard
Structural metal products and secondary members Structural metallic sections/profiles: Hot rolled, cold shaped or otherwise produced sections/profiles of various shapes (T, L, H, U, Z, I, ducts, angle, groove, pipe), flat products (layer, plate, band) made of various metal materials, protected or unprotected cast and wrought iron bars lined (coated) against corrosion. (To be used in metal structures or metal and concrete composite structures)	PDDD system: System 2+ EN 10025-1 EN 10210-1 EN 10219-1 EN 15048-1 EN 15088
Structural metal products and secondary members Construction materials made of structural metal: Trusses, beams, columns, stairs, floor rafters, bearing post and finished metal products such as sheet-piling (curtain). Parts, rails, traverses designed for certain applications and cut at appropriate sizes. These items might be lined and protected or unprotected against corrosion, or welded or seamless. (For use in foundations and construction frames)	PDDD system: System 2+ EN 1090-1+A1
Structural metal products and secondary members Welding materials. (For uses in structural metal works)	PDDD system: System 2+ EN 13479
Structural metal products and secondary members Structural fasteners: Metallic rivets, bolts (nuts and washers) and high-strength bolts (high-strength friction coupling bolts), studs, screws, railway joints. (For uses in structural metal works)	PDDD system: System 2+ EN 14399-1

## ISO 3834 WELDED MANUFACTURING QUALIFICATION CERTIFICATION

The welding process has a significant impact on the final product safety, and manufacturing cost and quality. It is very important that the welded manufacturing process and control stages of organizations are inspected, and they are certified if these stages are found appropriate. The certification of an organization's meeting the requirements of relevant standards, provides it a competitive advantage. The ISO 3834 standard has been prepared for organizations that carry out welded manufacturing operations and defines the appropriate quality requirements. The organizations with the ISO 3834 certificate can prove that their welded manufacturing operations meet the quality conditions within the scope of international standards. The international standards such as EN 15085-2 and EN 1090-1 require application of the ISO 3834 standard requirements.

The inspections begin from the design stage, and continue with the following matters:

- Review of the Requirements and Technical Examination
- Subcontractors

- Planning
- Inspection and Testing Personnel
- Equipment
- Welding and related activities
- Welding Consumables
- Storage of Main Material
- Post-welding heat treatment
- Welding Inspection and Testing
- Non-Conformity and Corrective Actions
- Calibration and validity period of measurement, inspection and testing equipment
- Identification and Traceability



The organizations that offer ISO 3834 Certification services must be authorized as an Accredited Certification Body according to the EN ISO/IEC 17065 standard.

As a Certification Body accredited by TÜRKAİ according to the EN ISO/IEC 17065 standard, Türk Loydu carries out welded manufacturing qualification certification activities according to ISO 3834-series standards.

It provides inspection and certification services to manufacturers for the products listed in the table below according to the ISO 3834 and EN 15085-2 standards.

Product	Standard
Quality requirements for fusion welding of metallic materials-Part 2: Comprehensive quality requirements	EN ISO 3834-2
Quality requirements for fusion welding of metallic materials-Part 3: Standard quality requirements	EN ISO 3834-3
Quality requirements for fusion welding of metallic materials-Part 4: Basic quality requirements	EN ISO 3834-4

You can reach the notified bodies following the links below: <http://www.turkloydu.org/tr-tr/musteri-bilgilendirme-sistemi/belge-sorgulama/iso-3834-belgesi-sorgulama.aspx> <http://www.turkloydu.org/tr-tr/musteri-bilgilendirme-sistemi/belge-sorgulama/en-15085-belgesi-sorgulama.aspx>

## AD 2000 MERKBLATT HP0, W0 WORKPLACE COMPETENCE

AD 2000 Merkblatt is a standard developed for the design and production of pressurized equipment, and includes the assessment of technical documents, test reports, working and testing procedures, conformity and adequacy of the plant, identification and traceability, suitability and adequacy of personnel, appropriate performance of necessary tests and inspections, and inspection of the conformity of equipment, raw materials and consumables. The notified bodies provide advantage in local and global markets in terms of product safety, customer satisfaction, preferability, and competitiveness. Within the scope of AD 2000 Merkblatt, Türk Loydu provides W0 certification services for product components and HP0 certification services for products. In 2017, Türk Loydu provided certification services for Öztürk Model Döküm Metal Makine Sanayi İth. İhr. Tic. Ltd. Şti., and Edkosan Çelik Dövme San. ve Tic. Ltd. Şti.

## WORKPLACE COMPETENCE CERTIFICATION

An organization being competent in terms of facility, personnel, equipment and applications, meeting the quality requirements, and manufacturing under controlled conditions is proved with the Workplace Competence Certification. Türk Loydu provides Workplace Competence Certification services to determine the competence of manufacturing places in terms of facility, personnel, machinery-equipment, and quality control facilities and applications. This Certificate verifies the production, equipment infrastructure and personnel qualifications of the inspected organization, and shows that it meets the quality requirements.

Within this scope, Türk Loydu has provided Workplace Competence Certification services to a total of 11 organizations. The certificate is valid for 1 year, and the inspections in the place of manufacture are repeated for recertification purposes at the end of the period of validity.

## INDUSTRIAL PLANT INSPECTION MAZIDAĞI FERTILIZER PRODUCTION COMPLEX PROJECT



The Fertilizer Production Complex being built by ETİ BAKİRA.Ş. in Mazıdağı, Mardin, includes a phosphoric acid plant, a sulphuric acid plant, an ammonia plant, a DAP plant and leach plants. When completed, the plant will have an annual fertilizer production capacity of 750,000 tons, and it will also allow obtaining valuable minerals by way of mineral processing, and sales of ammonia, and phosphoric and sulphuric acids. Within the scope of the project, 3rd party inspection services are provided for the inspection and conformity assessment of equipment, steel and piping manufacturing. The project has an investment cost of 1 billion and 90 million TRY, started in July 2015, and is estimated to be completed within nearly 3 years. When commissioned, the plant will have a concentrated phosphate production capacity of 437,760 ton/year, ammonia capacity



of 75,000 ton/year, sulphuric acid capacity of 650,000 ton/year, phosphoric acid capacity of 150,000 bin ton/year, phosphatic fertilizer capacity of 325,000 ton/year, and pyrite and iron ash capacity of 690,000 ton/year.

## CERTIFICATION OF MANAGEMENT SYSTEMS

In 2017, Türk Loydu continued its activities in management system certification for a wide range of customers in many sectors, primarily chambers of commerce and industry, commodity exchanges, local governments, training, shipbuilding, maritime, machinery, metal, chemical, transportation, and engineering services.

Standards certified in 2017:

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System
- OHSAS 18001 Occupational Health and Safety Management System
- ISO 10002 Customer Satisfaction Management System
- ISO 27001 Information Security Management System
- ISO 50001 Energy Management System



## VERIFICATION OF GREENHOUSE GAS EMISSION REPORTS

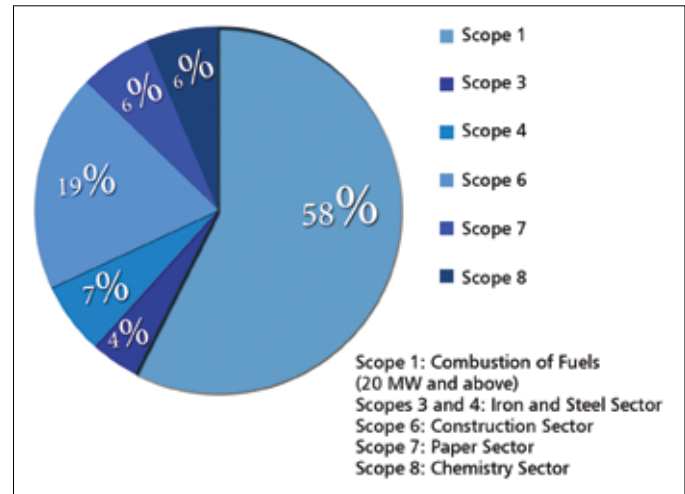
The greenhouse gas emission verification procedures have entered into force with the Regulation on Tracking of Greenhouse Gas Emissions prepared by the Ministry of Environment and Urbanization.

The plants that carry out the operations listed in Annex-I of the Regulation have been given the responsibility to prepare greenhouse gas emission reports, to have the reports verified by verification bodies, and to submit them to the Ministry of Environment and Urbanization (MEU)

every year until April 30. We completed the verification of the emission reports of 2015 and 2016 in this field, in which we started to provide services for the first time this year. Within the scope of our authorization certificate, we provided verification services in many different sectors such as energy, iron and steel, ceramics, lime, cement, glass, and chemistry. Also, in 2017, we applied to TÜRKAİ for greenhouse verifier body accreditation within the scope of TS EN ISO 14065. We will obtain accreditation and continue our works in 2018.

In 2017, Türk Loydu submitted a total of 95 verification reports within the scope of its MEU verification body authorization and ISO 14064 greenhouse gas verification works in the voluntary field. The following chart shows the distribution of verification works by sector.

Project Density Map by Scope



## ISO 27001 INFORMATION SECURITY MANAGEMENT SYSTEM CERTIFICATION

In 2017, Türk Loydu carried out its ISO 27001 Information Security Management System activities especially in the electricity generation, distribution, and natural gas distribution companies, and the organizations that fall in the scope of Authorized Economic Operator.

The ISO 27001 information security management system appeals to the whole sector; it can be applied to every organization in a varying range from small to large, production to service, and public to private sector. This standard is especially required in sectors such as energy, finance, health, public service, logistics, customs, export, import,

telecommunications, and information technologies, where protection of information is of great importance.

ISO 27001 Certificate is mandatory for an EMRA (Energy Market Regulatory Authority) License. With the amendments made by EMRA to the Electricity Market License Regulation, Natural Gas Market License Regulation, and Petroleum Market License Regulation, published in the Official Gazette dated 26/12/2014 and numbered 29217, the ISO 27001 information security management certificate obtained from organizations accredited by TÜRKAK.

The ISO 27001 Certificate facilitates Customs Procedures. As per the Regulation on Facilitation of Customs Procedures, published in the official gazette dated January 10, 2013, and amended on May 21, 2014, the organizations to apply for an Authorized Economic Operator certificate are required to have ISO 9001 and ISO 27001 Certificates.

## TOBB CHAMBER AND COMMODITY EXCHANGE ACCREDITATION SYSTEM

The Chamber/Commodity Exchange Accreditation System is a model created to improve the service quality of chambers and commodity exchanges affiliated to the Union of Chambers and Commodity Exchanges of Turkey (TOBB) within the scope of the "Chamber Development Program of Turkey", in cooperation between Eurochambers and TOBB within the frame



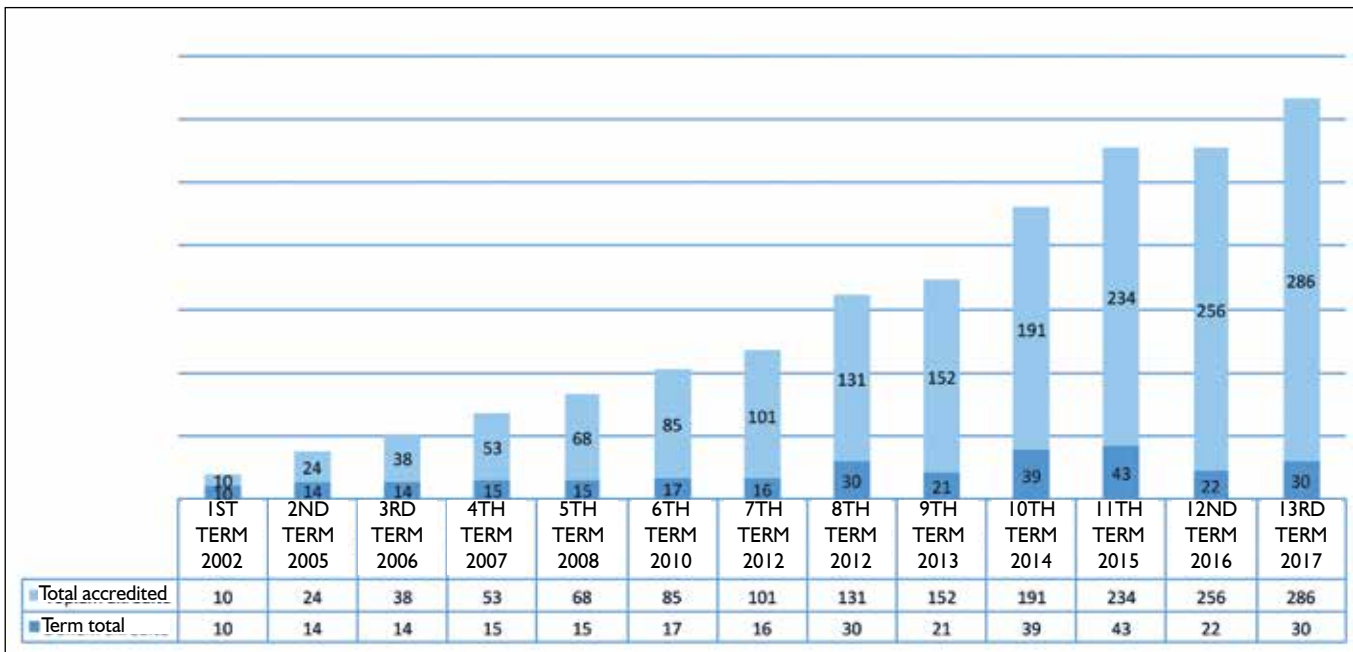
of ARCHIMEDES, and matured by taking into consideration the system of Eurochambers and British Association of Chambers, with the addition of the opinions regarding the German Chamber system.

Since 2005, Türk Loydu has been providing inspection and training services in the Chamber and Commodity Exchange Accreditation Project of TOBB.

In 2017, development visits to 13th term chambers and commodity exchanges, accreditation renewal audits in 1st, 2nd, 5th, 7th, and 10th term chambers and commodity exchanges, and



### ACCREDITED CHAMBERS AND COMMODITY EXCHANGES (By Year and Period)



\*) Development visits were made to 13th term chambers and commodity exchanges in 2017, and the accreditation audits will be performed in 2018.

development visits to 3rd, 8th, and 11th term chambers and commodity exchanges, were made. A total of 193 development visits, accreditation audits and follow-up audits were made.

## **CERTIFICATION OF CHAMBERS AND COMMODITY EXCHANGES AFFILIATED TO TOBB**

Türk Loydu has undertaken the training and auditing services in

TOBB's Chamber/Commodity Exchange Accreditation Project, and worked intensively in 2017 in training and certification of chambers and commodity exchanges to increase the level of application of their management systems.

The chambers and commodity exchanges certified by Türk Loydu are listed in alphabetical order in the table below:

Adıyaman TSO	Hayrabolu TB	Malkara TB
Akhisar TB	Hopa TSO	Malkara TSO
Amasya TSO	İğdır TSO	Mardin TSO
Anamur TSO	İMEAK DTO	Mersin DTO
Balıkesir TB	İMEAK DTO Fethiye Şubesi	Mersin TB
Bandırma TO	İMEAK DTO İskenderun Şubesi	Nusaybin TB
Bergama TB	İstanbul TB	Polatlı TB
Beypazarı TB	Kars TSO	Safranbolu TSO
Birecik TSO	Kastamonu TB	Sivas TSO
Burhaniye TB	Keşan TB	Soma TSO
Ceyhan TB	Kırıkkale TSO	Söke TB
Çankırı TB	Kırklareli TSO	Tarsus TSO
Çorlu TB	Kırşehir TB	Tavşanlı TSO
Diyarbakır TSO	Kırşehir TSO	Tokat TB
Edremit TO	Kızıltepe TB	Turhal TSO
Fethiye TSO	Kızıltepe TSO	Uşak TSO
Gaziantep TB	Körfez TO	Uzunköprü TB
Giresun TB	Kumluca TSO	Uzunköprü TSO
Giresun TSO	Kütahya TB	Zile TSO

TSO: Chamber of Commerce and Industry, TO: Chamber of Commerce, TB: Commodity Exchange, DTO: Chamber of Shipping

## **PARTICIPATION IN COOPERATIONS, MEETINGS, AND TECHNICAL ACTIVITIES**

### **57TH CEOC INTERNATIONAL GENERAL ASSEMBLY AND TECHNICAL COMMITTEE**

57th CEOC International General Assembly and Technical Committee Meetings were held between May 27 and 30, 2017 in Lyon. CEOC International is a non-profit sector organization with members consisting of 31 independent inspection and certification bodies from 19 countries, including Türk Loydu. Nearly 100 persons representing 29 members from 18 countries participated in the 57th General Assembly and meetings, including Ayfer ADIGÜZEL, Director of Industry and Certification Sector; and Mehtap Karahallı ÖZDEMİR, Manager of Business Development



Department. Following the discussion of technical subjects in meetings, members of the Board of Directors were selected. In addition to technical matters, new agenda items such as Brexit's impact on the certification sector, performances of accreditation bodies, and the e-conformity approach regarding verification product safety, were discussed in the Technical Committee meetings.



### NUCLEAR COOPERATION BETWEEN TÜRK LOYDU AND TÜV NORD GERMANY & TÜV NORD TURKEY

Turkey is preparing to switch to nuclear energy with the aim of eliminating its dependence on foreign sources in energy supply, and the investments continue rapidly with the Mersin Akkuyu nuclear power plant, which is under construction, and the Sinop nuclear power plant, which is at project design stage. The services provided for conformity assessment according to nuclear standards and legislations created for safe installation and operation of nuclear power plants, are among the most important stages of the process.

A tripartite cooperation protocol has been signed between TÜV Nord Germany and Turkey, the Germany-based, world-renowned, international conformity assessment body which operates in the field nuclear energy, and Türk Loydu, the national conformity



assessment institution of Turkey, to provide conformity assessment (testing, inspection and certification) and training services in this field. The tripartite cooperation protocol was signed on April 11, 2017 with a ceremony held in the Head Office of TÜRK LOYDU with the participation of the Chairman of the Board of TÜRK LOYDU Foundation Cem Melikoğlu, TÜV Nord EnSys GmBh & Co. KG General Manager and Head of Nuclear Energy Activities Astrid Petersen, and TÜV Teknik Kontrol ve Belgelendirme A.Ş. General Manager Rıza Başkan. Within the scope of the protocol, TÜV Nord Germany and Turkey company, which has broad international experience in nuclear energy, and Türk Loydu, one of the leading institutions of Turkey in industrial certification and inspection, will provide conformity assessment services in the field of nuclear energy with their sectoral knowledge, adequate infrastructure and high standards.

### ROADS, BRIDGES AND TUNNELS FAIR

The 2nd Road, Bridges and Tunnels Special Fair, organized by the Turkish Road Association, which establishes communication and cooperation between road transportation related public institutions, private sector organizations, and universities, took place at Congressium Ankara on May 24-26, 2017.

This year, 160 companies and more than 7,000 visitors attended the fair. The fair was organized under the auspices of the Ministry of Transport, Maritime Affairs and Communication to bring together the partners of road transportation sector, and to facilitate sharing of information related to projects.

Türk Loydu participated in the fair with a booth, and provided information to visitors about Türk Loydu and its activities.



### 3RD INTERNATIONAL PROCESS SAFETY SYMPOSIUM PREPARATORY SUMMIT

3rd International Process Safety Symposium Preparatory Summit was organized on May 17-18, 2017 in Istanbul.

TÜRK LOYDU, Industry and Certification Sector, Energy and Transportation Department Manager Hasan Müftüoğlu participated and made a presentation about "Determination of the Remaining Life of Existing Equipment for Process Safety"



in the 3rd International Process Safety Symposium Preparatory Summit supported by sector-representative institutions, where academic and practical information in the field of process safety are blended and influential guests transfer their knowledge and experience.

### 10TH NATIONAL WELDING CONGRESS

Türk Loydu participated in the 10th National Welding Technologies Congress and Exhibition held on November 17-18, 2017 in Ankara by the Chamber of Mechanical Engineers. Türk Loydu, Industry and Certification Sector,



Energy and Transportation Department Manager Hasan MÜFTÜOĞLU is in its Advisory Board.

Coming together with sectoral partners provided the opportunity to exchange information about new technologies, problems and solution suggestions. It was also an efficient platform for TÜRK LOYDU to introduce its sector-specific services.

### INTERNATIONAL RAILWAY INDUSTRY AND TECHNOLOGIES CONFERENCE

Türk Loydu participated in the International Railway Industry and Technologies Conference organized by IMC Organization in 'The Ankara' hotel inside the Ankara High-Speed Train Station Complex on May 25, 2017, and announced to the sector representatives that it has completed the structuring of the third-party conformity and safety assessment services, needed in the railway sector of our country, to be delivered using local manpower.

All partners of the sector, including public, private sector and non-governmental organizations, participated in the conference. As Türk Loydu's representative, Railway Projects Manager Özcan Aslan made a speech and informed the participants about our vision in railway sector, the cooperation agreements made within this frame, and the services planned to be offered.

Türk Loydu's efforts continue for the services to be locally delivered in the railway sector, and we work to form the basis of services to be delivered completely by local specialists in this field in the medium and long terms. We establish cooperations with Europe-based expert institutions for certain services which cannot be delivered locally yet, blending Türk Loydu's existing expertise with the expertise of its business partners in order to both contribute to the development of expertise in this field, and increase the ratio of local quality in these services."



## 3RD PARTY SERVICES IN THE LIBERALIZED RAILWAY SECTOR

Manager of Railway Projects  
**Özcan ASLAN**

### Railway Liberalization Process in the European Union

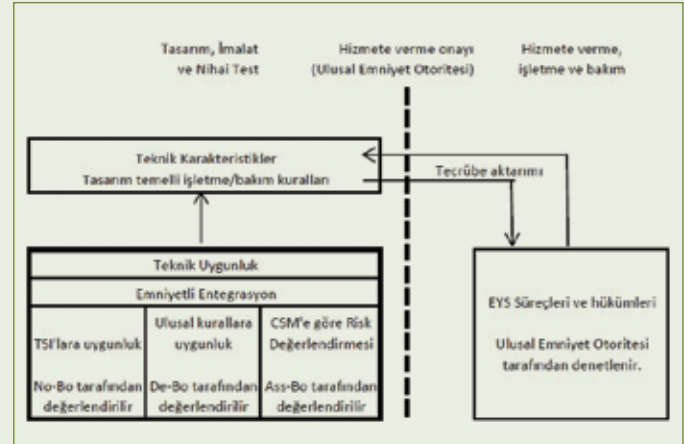
As of 1990, the inefficient structure of the railway sector under the state monopoly in Europe revealed the need for reform. Within this frame, the European Commission put into force the directive numbered 91/440, which requires member states to open certain freight train operations to competition and separate their railway transport operations and infrastructures at least at accounting level, in order to revive the railway sector and increase the efficiency of transport operations. In the following process, the member states adopted different approaches and separated their railway transport operations from infrastructure. In many areas left to the initiative of member states, the commission enacted four “railway packages”, first in 2001 and last in 2016, and implemented the necessary technical and legal regulations to establish a free, interoperable, safe, competitive and efficient railway transport sector within the union.

The approval processes to which the railway sub-systems (infrastructure, signalization, energy, vehicle) and components are subject in EU member states are summarized in the chart in the right column.

According to this chart; for any railway sub-system or component to obtain a commissioning approval from the National Safety Authority, such system or component must;

- Have a conformity assessment completed by a Notified Body according to the Technical Specifications of Interoperability (TSI),

- Have a conformity assessment completed by a Designated



Source: European Commission recommendation numbered 2011/217/EU on commissioning of railway sub-systems and vehicles

Body according to Notified National Technical Rules,

- Have a risk assessment completed by an Independent Safety Assessment Body in terms of safety using the Common Safety Method for Risk Assessment published for this purpose.

The Safety Authorities of the Member States have authorized one or more institutions within certain scopes to perform the said conformity and safety assessments. If a sub-system or component, which is subject to approval, will serve in more than one member state, this procedure must be repeated in all these countries (to a large extent) and separately approved by the National Safety Authority of each country.

For this reason, this table has increased the number of new organizations, which provide 3rd party services in this field in the member states, and caused the players which provide similar services to different sectors to add railways to their service portfolio.



### Liberalization Process of Railways in Turkey

The first concrete step regarding the liberalization of railways, which has been in the agenda of Turkey since 1995, when the Customs Union agreement was signed with the European Union, and has gained speed within the scope of works for harmonization with the *acquis communautaire* when the negotiations for full membership officially started in 2005, was taken with the “Law on Liberalization of Turkish Railway Transport” dated May 1, 2013 and numbered 6461. In the following process, General Directorate of Railway Regulation was established as the sector regulating organization, and in June 2016, the activity scope of TCDD (Turkish State Railways) was limited to infrastructure building and maintenance, and management of train traffic, and the freight and passenger transport activities started to be delivered by TCDD Taşımacılık A.Ş., registered as a subsidiary of TCDD. In this process, the General Directorate of Railway Regulation (DDGM) created under the Ministry of Transport, Maritime Affairs and Communication, has started working on a series of regulations to actually enable liberalization, and to create the necessary technical and administrative infrastructure which will allow the private sector representatives to carry out freight transport operations using their own fleets, personnel, and the railway infrastructure. In the legislation creation process which continues, to a great extent, as adaptation of the legislation enacted by the European Commission, to our country, the regulation to which the local organizations that will provide the 3rd party services mentioned in the previous section, will be subject (Regulation on Interoperability of Railway Systems), is waiting to enter into force.

Therefore, in the current situation, the conformity



assessment, independent safety assessment and certain other certification services according to the interoperability specifications, needed in the railway projects in our country and constitute one of the important legs of the independent railway sector, can be provided only via bodies authorized in EU member states. Until our Ministry of Economy completes the notified body appointment process it carries out together with the European Commission, the conformity assessment services according to the specifications within the scope of interoperability (TSI) will continue to be provided by foreign organizations. In the current situation, the conformity assessments performed according to the TSIs, which are mandatory only for vehicles as per the “Regulation on Recording and Registration of Railway Vehicles”, will become mandatory also for other structural railway sub-systems (energy, infrastructure, signal), as it is in Europe. Therefore, the conformity assessments to be performed according to TSIs will become more widely spread and more important in our country.

## ISO 22301 BUSINESS CONTINUITY

Chief Auditor

**Özlem ÖZKAN BOCUTOĞLU**



The organizations need to manage their processes efficiently in order to maintain their existence. They must eliminate the events which might occur during the management of processes due to apparent or non-apparent causes and prevent the business continuity.

Recently, we see that natural disasters, environmental accidents, technological attacks and similar disasters, man-made crises and similar severe events affect the public and private sectors. Regardless of sector and type, the organizations must be capable of identifying threats beforehand with an integrated management style, revealing their impacts on the operational activities, and satisfying the conditions for an effective response and value-creating activities such as reputation and brand, including the interests of partners.

The disaster recovery capability of an organization is directly related to the extent of efficiency of its pre-disaster business continuity planning. The researches show that two out of every five companies that face a disaster disappear in five years following a disaster.

The business continuity plans are of critical importance in the elimination of events that threaten the existence of every type of business or in providing opportunity to respond quickly in the face of such events, and more importantly, due to exposure to virtual threats as companies become increasingly dependent on technology.

The first international standard of the world for Business Continuity Management (BCM), ISO 22301, has been

developed to minimize such failure risks of organizations. The International Standardization Organization (ISO), published the new international standard for Business Continuity Management System (BCMS), ISO 22301, as “Societal security - Business continuity management systems - Requirements”.

It is aimed to apply the requirements specified in ISO 22301 to all organizations (or their subsidiaries), depending on their working environments and complexity, and regardless of their type, size and qualifications.

### Business Continuity Management - Business Benefits

It is essential that the support of top management in terms of management and resources is obtained for business continuity management in the organizations. Instead of emphasizing the disadvantages of not having a business continuity management, the best way is to show the positive results of an efficient business continuity management process. Today, implementation of a business continuity management is seen as being forced to act for external pressures. However, an efficient business continuity is related to an integrated approach spread across the organization, recognition of its positively added value, and its adoption, not as an institutional management view, but as a part of the life cycle.

Certain elements that create awareness in the organization for the added value provided by an effective Business Continuity Management implementation are as given above:

Adoption of an efficient business continuity management process will provide many benefits for that organization;

Foreseeable and Efficient Response to Crises	Protection of humans	Maintaining the vital activities of the organization	Better understanding the organization
Cost reduction	Respect to relevant parties	Protection of reputation and brand	Win the confidence of customers
Competitive advantage	Legal compliance	Compliance with the rules	Contract conformity

some of which include:

- Improvement of a business mentality obtained through risk identification and analysis
- Protection of the shareholder value
- Operational strength gained from risk reduction
- Decrease in the number of stops in business processes thanks to the alternative processes identified and temporary solutions
- Flexible decision making and managing abilities for alternative processes
- Maintainable and protectable important records
- Correct prediction of their impacts on the Occupational Health and Safety legislation and maintenance services
- Increase in operational efficiency with a strong business process and a reengineering program
- Protection of both the physical and information assets of the operation
- Protection of markets by ensuring continuity of supply
- Improved general security
- Avoiding sanctions



## INSPECTION OF ROOF AND FACADE SYSTEMS

Senior Inspector  
**Bekir YÜKSEL**

The roof and facade systems are two of the most important items in the design of a structure. They are the face looking towards the world. They are highly responsible for the energy efficiency, air circulation and water resistance of structures; but they are also considerably complex systems. Inspection of the roof and facade systems, which have such big importance for the structures, at the manufacturing stage, is also of vital importance.

Use of the roof and facade systems manufactured without control processes, causes losses of comfort, expensive alterations, and system modifications in an early period during their life.

The most frequently faced problems in roof and facade systems are corrosion, thermal losses, decrease in air-wind resistance, and disruption of system integrity.

The inspection processes must be managed by taking into consideration all aspects of the structural protection performance, including material selection and compatibility, water impermeability, air impermeability, structural qualification, energy efficiency, cost, feasibility, maintenance requirements and environmental safety. First of all, compatible system components must be selected for the project, the compliance of the selected system components with the relevant standards must be inspected, and they must pass the performance tests specified in the standards within tolerance limits. In the management of control processes, the Quality Control Plan prepared by taking into consideration all factors and standards, the necessary control steps, and the roles of parties in the process must be determined. The processes managed by following this plan must be



discussed under two main titles as factory manufacturing control and installation control.

### **Factory Production Control:**

The system components selected for the roof and facade systems must be inspected at the factory production stage according to the prepared quality control and test plan. The whole process, including:

- Incoming main and consumable material control
- Manufacturing method and process control
- Final product conformity and tests

The processes managed by following this plan must be discussed under two main titles as factory manufacturing control and installation control. Must be completed. The quality control file must be prepared, then the approval for shipment must be given.

### **Installation Control:**

At the installation stage of the system components selected for roof and facade systems, first the appropriate building method must be determined. Within the scope of building method, factors such as labor competence, and occupational health and safety must also be taken into account.

A material approval form must be prepared for each selected system component, including the product certificates, test results and sample material prepared according to the relevant standards, and it must be submitted for material approval.

The system section formed by all system components must be tested in the laboratory environment for energy efficiency, earthquake, wind - air resistance, acoustics, impermeability, and the performance criteria required by the specific project. The results of these tests must meet the standards and target values of the project. During the transportation of the approved materials to the site, the quality control file, material shipment form, material verification, no damage status, stacking and temporary inventory status must be checked. Map measurements must be taken of all points where the system components will be connected to the main supporting system, and the measurement values must be checked against the project tolerances. After map measurement, the anchorage and support points where the system components will be connected to the main supporting system must be prepared and checked. After each critical step at the installation stages of system components determined according to the quality control and testing plan, an installation check must be performed by expert inspectors. The performed checks must be recorded, and follow-up procedures must be applied for



the identified nonconformities, if any. After the elimination of nonconformities, necessary checks must be performed before moving to the next stage.

Final checks must be performed after completion of the installation according to the quality control and test plan, and the system installation must be completed by performing the tests determined according to project requirements such as impermeability, strength, etc.

Periodic quality control inspections to be performed throughout the service life of roof and facade systems contribute highly to the identification of potential environment impact-based problems beforehand, and extension of the system's service life by way of low-cost measures and alterations.

All quality control and test processes described specific to the roofs and facades must be carried out by specialists and notified bodies.









# TRAINING SERVICES



## TRAINING ACTIVITIES

The trainings we offer as Türk Loydu (Türk Loydu Conformity Assessment Corp.) by taking into consideration the needs of our sectors (Maritime, Ship and Yacht Building, Energy, Manufacturing, Transport, Logistics, Defense Industry, etc.) continued in 2017 with the addition of new training subjects.

In addition, we made new cooperation protocols in the field of training to offer better training opportunities to our sectoral partners.

Türk Loydu has aimed to become a leading institution in trainings intended for its sectors, by combining its ability to offer innovative trainings with its skill to establish sectoral cooperations.

The trainings offered by Türk Loydu are planned as trainings open to general participation, trainings organized within the frame of the requests received from companies and institutions, and those organized according to the requests of government agencies. Our trainings can be listed in 5 main groups.

1. Management System Trainings
2. Maritime Trainings
3. Transportation / Logistics Trainings  
(including trainings within the scope of DGSA and IMDG code)
4. Trainings within the scope of Industrial Activities
5. Trainings within the scope of Institutional and Individual Development

All our trainings are delivered by our expert and experienced instructors, and the training contents are continuously developed and improved with feedbacks received after trainings.



At the end of our trainings, the participants are given Türk Loydu attendance or achievement certificates, depending on the training they have received. Training completion certificates are issued for certain trainings (Dangerous Goods Safety Advisor –DGSA; trainings within the scope of IMDG code, and Maritime Surveillance Officer Trainings).

With an infrastructure consisting of 5 training halls, one of which is equipped with computers, and one Conference Hall, Türk Loydu is capable of providing the ideal conditions and solutions for all training needs of our sectoral partners. In 2017, trainings were offered under 55 different topics.

**Number of Trainings Delivered:** 121

**Number of Participants to Trainings:** 1848



## NEW TRAINING TOPICS IN 2017

We have aimed to increase the variety of trainings considering the needs of our sectors within the frame of new developments, and in 2017, we scheduled and started to offer new trainings especially in the fields of management systems, industrial, transportation, logistics, maritime, institutional and individual development. Our new trainings first offered in 2017;

### Within the Scope of Management Systems

- Training on Root Cause Analysis within the scope of ISO 9001:2015 Quality MS
- Training on Risk Based Process Management within the scope of ISO 9001:2015
- ISO/IEC 20000 Information Technologies Service Management System Internal Auditor Training
- ISO 9001:2015 Quality MS Chief Auditor Training
- Training on ISO/IEC 17024 Personnel Certification Eligibility Conditions

### Within the Scope of Industrial Activities

- Training on CE Marking and EN 1090 Standard in Steel Constructions
- Training Accident Root Cause Analysis
- Training on Maintenance of Equipment Used in Hazardous and Explosive Atmospheres according to EN 60079-17/19 within the scope of ATEX Directives
- Static Electricity Training within the scope of Occupational Health and Safety
- Explosion Protection General Awareness Training

### Within the Scope of Transportation / Logistics / Maritime Activities

- Training on Loading Safety on Highways
- Training on Selection of Electrical Equipment on Ships in Dangerous Zones
- Training on Dimensional Calculations in Military Ship Rules
- Information Training on Vessel and Machine Pipe Circuits
- Training on Design Principles in Military Ship Rules
- CBRN (Chemical-Biological-Radiological-Nuclear) Ventilation System Training
- Training on Interior and Exterior Openings in Ships

### Within the Scope of Institutional and Individual Development Trainings

- Time Management Training
- Motivation and Stress Management Training
- Training on Negotiation Skills and Brain Storming
- Training on Strategic Plan Preparation

### Our Maritime Surveillance Officer Trainings

In 2017, the “Directive on Authorization of Surveillance Companies That Will Provide Surveillance Services with regard to Dangerous Goods” published by the General Directorate of Dangerous Goods and Combined Transportation (amended on July 13, 2017 with the Minister’s consent numbered 57300) brought additional requirements for the surveillance companies that will carry out surveillance operations within the frame of maritime trade for dangerous goods and the cargoes which pose danger in terms of loading safety.







The surveillance companies which will operate within the scope of this Directive were made responsible for ensuring that their maritime surveillance officers receive the trainings specified in ANNEX-3 of this Directive, regarding their areas of activity, from the training institutions authorized by the Ministry (MTMAC), until 01.01.2018.

Even though the said directive entered into force in 2017, on 27.12.2017, the Ministry announced to the training institutions and those concerned that the directive will be reviewed and revised. The announcement stated that the Ministry plans to complete the revision works before 01.07.2018.

As a result of its application to the General Directorate of Dangerous Goods and Combined Transportation, Türk Loydu obtained the IMDG Code Trainings Institution Authorization Certificate in 2011, TMDG Trainings Authorization Certificate in 2014, "Maritime Surveillance Officer Training Institution Authorization Certificate" on September 25, 2015, and it is capable of providing all "Maritime Surveillance Officer Trainings" in addition to the trainings within the scope of IMDG Code under the current Directive.

### **Training Seminars Required for Maritime Surveillance Officers:**

In the current directive, the surveillance activities of the maritime surveillance companies have been listed as follows:

1. Activities within the scope of International Maritime Dangerous Goods Code (IMDG),
2. Activities within the scope of the Code of Practice For Packing of Cargo Transport Units (CTU Code),
3. Activities within the scope of the International Maritime Solid Bulk Cargoes Code (IMSBC Code),
4. Activities within the scope of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code),
5. Activities within the scope of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code),
6. Activities within the scope of Packaged Radioactive Materials and/or the INF Code,
7. Ship related surveillance activities,
8. Activities within the scope of the International Code for the Safe Carriage of Grain in Bulk (International GRAIN Code),

**9.** Activities within the scope of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes (TIMBER Code),

**10.** Activities regarding scrap cargoes

**11.** Activities regarding the dangerous goods defined in Annex-I of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)

The maritime surveillance officers who will request surveillance authorization in each of the areas listed above, must receive from among the following training seminars, the ones associated with the area of activity specified above, in addition to the IMDG Code Trainings (General Awareness and Mission Related Refreshing Training, when needed). All of the training seminars specified in the existing directive are listed below.

- a)** Visual Inspection in Maritime Surveillance Training Seminar,
- b)** Sampling Training for Maritime Surveillance Officers,
- c)** Surveillance of Dangerous Goods Training for Maritime Surveillance Officers,
- ç)** Training Seminar for Radiation Protection and Radiation Detection in Maritime Surveillance Services,
- d)** Explosive Material Surveillance Training Seminar,
- e)** Security and Loading Safety Training for Maritime Surveillance Officers,
- f)** Cargo Securing Calculation Training for Surveillance Officers,
- g)** Container/Vehicle Loading Certificate Preparation Training Seminar.
- ğ)** Warehouse/Tank Conformity Surveillance Training Seminar,
- h)** IBC Code Training Seminar,
- ı)** IGC Code Training Seminar,
- i)** CTU Code Training Seminar,
- j)** INF Code Training Seminar,
- k)** Ship Breaking Surveillance Training Seminar,
- l)** GRAIN Code Training Seminar,
- m)** TIMBER Code Training Seminar,
- n)** Secure Loading Surveillance Training Seminar for Timber Cargo,
- o)** Metal Scrap Surveillance Training Seminar,
- ö)** Iron and Steel Products and Other Metal Types Surveillance Training Seminar

Our Dangerous Goods Safety Advisor (DGSA) Trainings are delivered within the scope of our authorization certificate obtained in 2014 from the Ministry of Transport, Maritime

Affairs and Communication. The DGSA Communiqué published on 22.05.2014 was amended with the Official Gazette published on 19.04.2017. The amendment includes fundamental changes in many topics such as requirements for becoming a DGSA, training hours, and providing services as a DGSA. The rights to training and exam of the candidate DGSAs, and the DGSAs who received training before publication of the communiqué on 19.04.2017, whose right to exam is still valid or expired, and who graduated from undergraduate programs other than science and engineering, are still valid.

### **Our Trainings;**

DGSA Training within the scope of ADR (64 hours)

- The training period is 8 days with 8 hours a day, including weekend days and working hours (with the amendment to the communiqué, those who receive TMDG training within the scope of ADR, must also receive 8 hours of theoretical and applied fire training in addition to the DGSA Training. This extends the training period to 9 days.)

- Dangerous Goods Safety Advisor (DGSA) Training within the scope of IMDG Code and RID (42 hours)

The training period is minimum 13-14 days outside working hours, between 17:00 or 18:00 to 21:00 and 8 hours a day on weekend days (4 days).

This training is organized for those who received DGSA Training within the scope of ADR. The training is delivered in both modes of transportation (maritime and railway), as an additional training of 21 hours each. It takes minimum 6 days in total. After the completion of training, within the scope of ADR organized by the Ministry of Transport, Maritime Affairs and Communication (MTMAC), the DGSA Certificate exams held together for both modes of transportation, similar to the DGSA Certificate exams, are taken. The prerequisites for taking the DGSA Certificate Exam within the scope of IMDG code and RID are as follows: to receive a DGSA Training within the scope of IMDG Code, and to have a DGSA Certificate within the scope of ADR.

The detailed regulation regarding the subject was made with the "Communiqué Regarding Dangerous Goods Safety Advising" (Communiqué No: TMKTDGM-01) published in the Official Gazette dated May 22, 2014 and numbered 29007, by the Ministry of Transport, Maritime Affairs and Communication. Within the scope of this communiqué, it was stated that the companies in the dangerous goods transportation chain, which ship, package, load and unload

goods, and the transportation companies, are responsible for employing at least one “Dangerous Goods Safety Advisor” (DGSA) or procure services of a dangerous goods safety advisor, by stating the temporary exemptions and periods.

The obligation to employ a DGSA or procure services entered into force on June 30, 2015 in many companies within the scope of legislation.

As per the first four paragraphs of Provisional Article 2 of the communiqué mentioned above;

- (1)** The retail fuel, LPG, CNG and LNG stations, and the businesses selling LPG and CNG cylinders will not be required to employ a DGSA or procure services from a DGSA company until 1/1/2018.
- (2)** The port facilities that carry out operations related to transportation and temporary storage of dangerous goods will not be required to employ a DGSA or procure services from a dangerous goods safety consulting company until 1/1/2018.
- (3)** Those operates in transportation and have a transportation authorization certificate according to the Road Transport Regulation and those who are solely engaged in transportation activities within the scope of the Regulation on Road Transport of Dangerous Goods, will not be required to procure services from DGSA companies or employ a DGSA until 1/1/2018.
- (4)** State institutions and organizations will not be required to procure services from DGSA companies or employ a DGSA until 1/1/2018.

For these reasons, especially the businesses, state institutions and organizations, and transport companies that will be required to employ a DGSA or procure services from a DGSA company as of January 1, 2018, should make good use of year 2018. TMMOB Chamber of Chemical Engineers, TMMOB Chamber of Environmental Engineers, and TMMOB Chamber of Marine Engineers apply discounts in training fees to their members based on the protocols made in the previous term. Similar protocols may be made with other Chambers and Associations in 2018. Other trainings we offer within the scope of transportation and logistics, primarily in Dangerous Goods Transportation, are specified below. A part of these trainings are both open to general participation and available for the requesting institutions and organizations. Some of these trainings are only available when requested by institutions and organizations.



- Class I (ADR/IMDG Kod/RID) Information about Transportation of Explosive Materials
  - Class 7 (ADR/IMDG Kod/RID) Information about Transportation of Radioactive Materials
  - Loading Safety on Highways
  - Training on Cargo Safety in Road and Sea Transportation; Secure Stacking and Fastening Calculations
  - Training on Safe Execution of Fumigation Operations within the scope of CTU Code
  - Implementation Code (CTU Code) Training for Packaging of Cargo Transportation Units
  - Draft Survey Calculation Information Training
  - International Convention for Safe Containers (CSC), Information
- EN 12798:2007 Road, Rail and Inland Navigation Transport - Quality Management System Requirements to Supplement ISO 9001 for the Transport of Dangerous
- Goods with regard to Safety, Information Training

### ONGOING TRAININGS

In 2017, we carried out a widespread training program for the Chambers and Commodity Exchanges operating under the Union of Chambers and Commodity Exchanges of Turkey. We delivered trainings in different topics on various management systems (ISO 10002, ISO 14001, ISO/IEC 27001, etc.), primarily the ISO 9001:2015 Quality Management System. Also, our trainings in industry, maritime, transportation and logistics received great interest from sector representatives and participants. General information about our ongoing trainings are given below:



## **Training Seminars within the scope of IMDG Code:**

The training seminars we started to deliver on September 17, 2011 as a Notified Body, also continued in 2017 as per the “Regulation of Training and Authorization within the scope of International Maritime Dangerous Goods Code” as amended and republished in the Official Gazette dated January 22, 2016 and numbered 29601, by the Republic of Turkey, Ministry of Transport, Maritime Affairs and Communication.

Our trainings organized within the scope of IMDG Code are in three different groups. The Refreshing Training Seminars within the scope of IMDG Code, which started in 2013, also continue. The employees, who fall into the scope of the regulation and previously received IMDG Code General Awareness and Mission Related Trainings, are required by the relevant legislation to participate in the Refreshing Training Seminars within the scope of IMDG Code in no later than two years.

1. IMDG Code General Awareness Training Seminar (1 day)
2. IMDG Code Mission Related Training Seminar (3 days)
3. IMDG Code Refreshing Training Seminar (1.5 days)

IMDG Code General Awareness and Mission Related Trainings must be taken together and take 4 days in total. With the legislation enacted in conformity with the IMDG Code version 37-14, under the title Safety Training, a training topic including the subjects, which were previously within the scope of Mission Related Training, was defined. The Safety Training is delivered within the IMDG Code Mission Related Training.

## **Trainings for Management Systems;**

- Information/basic and internal auditor trainings provided within the scope of “ISO 9001 Quality Management System”, “ISO 14001 Environmental Management System”, “OHSAS 18001 Occupational Health and Safety Management System”, “ISO 10002 Customer Satisfaction Management System”, and the Integrated Management System trainings consisting of certain combinations of these standards
- “Process Management and Improvement” and “Refreshing and Experience Sharing for In-House Auditors” trainings
- ISO 50001 Energy Management Systems Information and Internal Auditor Trainings
- ISO 27001 Information Security Management System Information and Internal Auditor Trainings
- SO / IEC 20000 Information Technologies -

## **Service Management System Information Training**

Since the standards within the scope of ISO 9001 and ISO 14001 were updated in 2015, the standard revision transition trainings and the Information and Internal Auditor trainings given within the scope of 2015 standards were delivered prevalently. We predict that the same process will also be carried out for the trainings under ISO 45001, after the OHSAS 18001 ISGYS standard was amended by the ISO 45001 standard.

## **Trainings for Industrial Activities;**

- Information Training on the Pressure Equipment Directive (97/23/EC) and Simple Pressure Vessels Directive (2009/105/EC)
- Information Training on the Application of Tests in Pressure Vessels
- General-Technical Information Training on Lifting Equipment
- Training on CE Marking and EN 1090 Standard in Steel Constructions
- Trainings within the scope of Occupational Health and Safety
- Information Training on Occupational Health and Safety in Shipyards
- Information Training on Occupational Health and Safety for Working in Confined Spaces
- Information and Theoretical Training on Safe Scaffold Erection and Safe Working on Scaffold
- Information Training on Welding Defects and Evaluation
- Explosion Protection Document Preparation Training
- Explosion Protection General Awareness Training
- Applied General Fire Training
- Working at Height Training
- Emergency Team Training and Emergency Evacuation Drill
- Information Training on Degasification and Gas Measurement Techniques

## **Trainings for Maritime and Shipbuilding Maintenance and Repair Industry;**

- “Auditor” trainings under the International Safety

Management System (ISM Code) ISM Code Auditor Training is one of the DPA appointment criteria and is a two day training that Türk Loydu has been delivering widely since 2009.

- “MARPOL International Convention for the Prevention of Pollution from Ships” training: The training, which was tailored to ship operators, has also been developed specifically for ports and marine terminals.
- MLC, 2006 (ILO Maritime Labor Convention, 2006) trainings: As of the beginning of 2011, trainings within this scope are among our trainings open for general participation. It is anticipated that this training will attract even more interest in the upcoming period.
- International Conventions / Codes / Standards Training within the scope of Marine Terminals
- Market Surveillance and Inspection of the Products within the scope of the Leisure Boats Regulations
- Information and Implementation of the Ship Energy Efficiency Management Plan

### **Trainings for Institutional and Individual Development;**

Our trainings in this scope are usually delivered within the frame of demands, and in 2017, they were planned as trainings open to general participation.

One of our long-standing shipyards which has been delivering international shipbuilding and repair services for 42 years, “HİDRODİNAMİK GEMİ SAN. VE TİC. A.Ş.”, declared year 2017 as the development year of employees, in order to further strengthen its corporate identity and offer innovative solutions to the sector. Hidrodinamik Shipyard decided to include not only its executives but also its employees in the trainings, and selected TÜRK LOYDU as its training partner. The “Institutional Development Trainings” that we offer as “Open to General Participation” or “Specific to Organization”, are preferred for its positive contributions to the performances of executives and employees. Chairman of the Board, Asuman ÖZER, who has supported the production of Marti, the first Hydrogen Boat of Turkey designed by students, and won the appreciation of the sector with her development-oriented approaches, has emphasized their confidence in Türk Loydu in technical trainings, as well as institutional development trainings. Mentioning that Chambers of Commerce and Industry are also listed in the training references of Türk Loydu among many others, she said that they did not feel the need to look for another training institution, and they have chosen

Türk Loydu for all technical and institutional development trainings planned for 2017.

### **The institutional development trainings given to this organization are listed below.**

- Accident Root Cause Analysis
- Time Management
- Motivation and Stress Management
- Process Management and Improvement

The titles of trainings that can also be delivered similarly within this scope are listed below.

- Safe Behavior,
- Emotional Intelligence,
- Problem Solving and Decision Making Skills
- Correct and Effective Speaking Skills
- Change Management
- Efficient Written Communication at Work
- Developing Management and Leadership Skills
- Strategic Thinking and Planning Skills
- Developing Coaching Skills

### **NEW COOPERATION PROTOCOLS RELATED TO OUR TRAINING ACTIVITIES**

By increasing our ongoing cooperation protocols with the new cooperation protocols started in 2017, we aimed to give momentum to and spread our trainings within sectoral solidarity and interaction.

### **Training Cooperation Protocol with YTU Yıldız Continuous Education Center (SEM)**

Within the scope of cooperation of Türk Loydu with Universities, Chambers of Profession and Organized Industry Zones for the purpose of signing training cooperation protocols and organizing various trainings in sectoral fields, we started discussions for a training cooperation protocol with YTU Yıldız Continuous Education Center (SEM) at the end of 2016, and the protocol was signed on 10.01.2017. This “Training Cooperation Protocol” signed between Yıldız Technical University, one of the leading institutions of Turkey in the field of higher education, and Türk Loydu, one of the leading institutions in the fields of classification, industrial certification, inspection, and training in industrial and maritime areas, aims to organize trainings open to general participation, with their sectoral knowledge, infrastructure, and higher education standards.

Within this scope, trainings under different topics were designed, and the “Explosion Protection Document Preparation Training” was delivered as open to general



participation. In 2018, we will continue our efforts to expand the scope of trainings and to be delivered in a widespread manner.

### **Cooperation Protocol with Tuzla District Directorate of National Education**

Within the scope of training planning for 2018, Türk Loydu's cooperation efforts for signing protocols for cooperation in training, especially with Universities, Public Education directorates, Organized Industry Zones, and Chambers of Commerce, and organizing various trainings in sectoral fields, also continued in 2017.

Within this scope, a cooperation protocol was signed on December 1, 2017 between Tuzla District Directorate of National Education and Turk Loydu Conformity Assessment Corp. with regard to vocational trainings. The Chairman of the Board of our Foundation, Mr. Cem MELİKOĞLU: "The purpose of this protocol is to improve qualifications of employees, deliver vocational trainings to new members of employment, and certify the sector employees, within the cooperation between Tuzla District Directorate of National Education and Turk Loydu Conformity Assessment Corp.

In addition, MELİKOĞLU stated that all trainings within the scope of MEGEP (Vocational and Technical Education Program) can be organized together under the protocol, and regarding the training subjects needed by the industries, they will make all necessary efforts to organize vocational and technical education seminars together with Tuzla District

Directorate of National Education, and firstly, the Lashing Personnel, Port Control Personnel, and Port Control Engineer trainings will be organized to meet the great need of the sector. She also wished that the trainings to be organized within the scope of this protocol to contribute to the maritime and industrial sectors, and this cooperation to bring good fortune to employees and companies in the sector.

The training dates to be announced in the 2018 training schedule can be followed up on the website of Türk Loydu.

### **Availability of Türk Loydu's Training and Conference Halls within the frame of External Demands**

Taking into consideration the needs of our sectors, our training halls are made available for use within the frame of trainings, courses, meetings and similar activities organized by various institutions, organizations and companies.

- Our training and conference halls were allocated for the software trainings, technical trainings, seminars and meetings organized by TMMOB Chamber of Marine Engineers for its members and students in 2017.
- Our Prof. Dr. Teoman ÖZALP Conference Hall was allocated for the meetings planned by the Turkish Association of Ship Industrialists for their members in 2017.
- Our training halls were also allocated for the meetings held by Hidrodinamik Shipyard with its employees.







# TL TECHNICAL RD and DESIGN COMPANY



## TL TECHNICAL RD and DESIGN COMPANY

### TL Technical R&D Design Ltd. Corporation

TL Teknopark ARGE Ltd. Şti. was founded in February, 2015 to develop R&D projects for the Maritime, Energy, Transportation, and Defense Industries, provide R&D support to Türk Loydu in rule development works, and become a leading company with its knowledge and engineering services. It moved to Türk Loydu's Head Office in November 2016, expanded its operations in August 2017, and continues its operations as TL Teknik ARGE ve Tasarım Ltd. Şti. TL Teknik ARGE company has taken important roles in two projects carried out by Türk Loydu under the scope of Erasmus+ and supported by the Turkish National Agency, with the aim of increasing its support to Türk Loydu every year.

### European Union Project Support (NEO-COL) (Erasmus +)

TL Teknik ARGE ve Tasarım Ltd. Şti. provides support in the



follow-up, correspondence and coordination works regarding the ongoing “NEO-COL (Navigational Equipment Oriented COLregs Training)” project within the scope of Erasmus+ KA2 call for Vocational Training Strategic Cooperations, and it contributes to the development of online training modules and a assessment&evaluation tool for COLRegs (Regulations Preventing Collision at Sea) in this two-year project by taking into consideration the devices on different types of vessels and the experience of various seamen.

### European Union Project Support (SEAMAP) (Erasmus +)

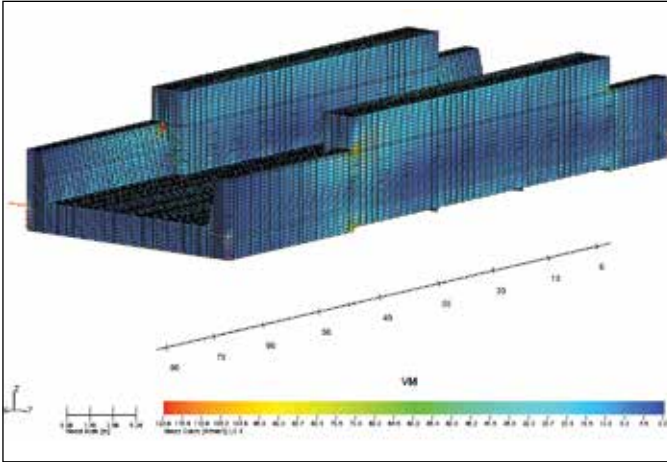
“TL Teknik ARGE ve Tasarım Ltd. Şti.” provides support for the follow-up, correspondence and coordination works related to the “SEAMAP (Searching the Extensive Application at Maritime Protocol)” project in progress within the scope of the call for Erasmus+ KA2 Vocational Training Strategic Cooperations.

The SEAMAP project encourages integration of the working life at sea into the vocational training system based on maritime institutions, and addresses the necessity of cooperation between Vocational Training and Education and the working life at maritime sector, and development of the entrepreneurship skills of those interested in maritime topics.

This will be ensured by encouragement of more job-related activities in the designed vocational training and education programs, including innovative models of job placement (work experience, work shading, wok based learning and apprenticeship training).

The project team will identify and match the existing maritime jobs / placements and startups, both common and in marine





countries. Primary benefits of the project are as follows: increase attraction of the maritime industry, increase general mobility, encourage career guidance, develop placement opportunities, and develop entrepreneurship competences of persons in maritime and Vocational Training and Education sectors.

### **Research and Development Works European Union Project Support (SOREAS) (Martera) Application**

A joint application was made to the “Ship and Offshore Units Resilience at Sea” project with ELKON (ITU), DELFT and CALIBRIA Universities within the scope of MARTERA and TÜBİTAK 1509.

Even though the result of the application came out negative by a narrow margin, it has allowed establishment of a good infrastructure with a larger consortium to the MG-2-2-2018: Marine Accident Response call under the European Union Horizon 2020 R&D and Innovation Program, Solutions to Societal Challenges section.

### **New Project Applications within the scope of European Union Project Support H2020**

Thanks to the continuous monitoring of calls for new projects by TL Teknik ARGE ve Tasarım Ltd. Şti., we examined in detail the Smart, Green and Integrated Transport 2018-2020 Work Program under the European Union Horizon 2020 R&D and Innovation Program Solutions to Societal Challenges section, and found a total of five calls to apply to as a project partner; three in 2018, and two in 2019.

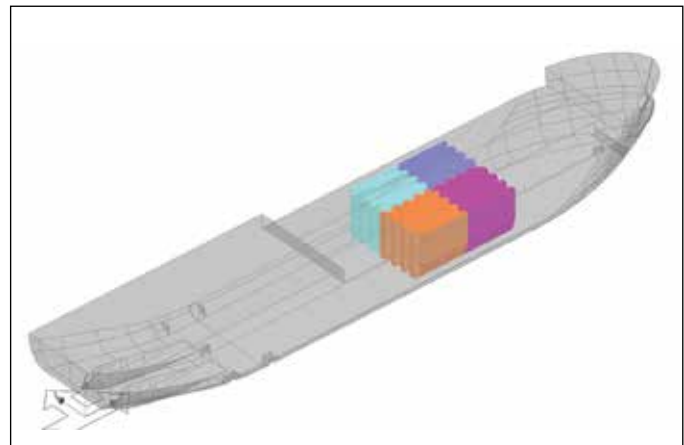
We started to contact the relevant local and foreign institutions to be able to take part in the calls.

### **Vessel Calculation Program**

The development of this project, foundations of which go back, was put on the agenda again in 2017, and a preliminary study was completed in 2017 for the development, graphical interface and rule calculations of this program to be prepared for vessel dimensional calculations, and these works gained momentum by the end of the year.

### **Ship Tank Calibration**

TL Teknik ARGE ve Tasarım Ltd. Şti. continued supporting the rule development activities of Türk Loydu in 2017, also provided support for preparation of the calibration boudés of ship tanks according to API MPMS 2.8 A C2, and four ship tank calibrations were completed in this year.











# TÜRK LOYDU EAST EUROPE S.R.L.







## TÜRK LOYDU EAST EUROPE S.R.L.

With the company established by Türk Loydu Foundation in Romania, the restructuring works to cover all Eastern Europe and the Black Sea region have been started. For this purpose, the company named TL Romanya S.R.L. was changed as TL East Europe S.R.L., and beginning from 2018, it will start its operations to grow in this region, primarily Romania.

The primary objective of the restructured company is to transfer the ships owned and operated by Romania-based ship owners, operating companies, and agencies of Syria, Lebanon, Egypt, and Jordan origins, to the class of Türk Loydu.

With the flag authorization received by Türk Loydu from Panama Maritime Authority in 2017, positive developments are expected on transfer of Panama-flagged foreign ships to Türk Loydu. Cooperations continue, especially with the design offices in Constanta region of Romania, to take part in the livestock ship projects being and to be built or transformed in upcoming years in this region.

With the restructured company, the efforts continue to increase the operations in other sectors of Türk Loydu. With this, it is aimed to increase the third-party surveying services included among the activities of the Industry and Certification Sector.

In this context, quality control services will be provided for the steel construction, manufacturing, installation and other relevant operations in the projects including Turkish and Romanian companies investing in Romania and other neighbor countries.

The preparations to deliver these services started by considering the needs created in this area with the increasing business volume and ship traffic at Romanian ports, and by making business plans in order to provide marine surveillance and survey services, quality control services, and conduct condition surveys to/on the ships that call Romanian ports for cargo handling..

Türk Loydu carries out all its services within the frame of internationally recognized accreditations and authorizations, the works have been started to ensure that its company in Romania is accredited by the Romanian accreditation body RENAR, and becomes a “Notified Body” in line with the relevant directives of the European Union.

Romania has been a member of the European Union since 2007 and a NATO country since 2004, and it is considered as a bridge between East and West due to its strategic geographical location. It will also take over the EU chairmanship-in-office in 2019, and is expected to achieve an economic growth above 5% in 2017. Due to such characteristics, Romania is viewed as a window to the consumer market of the European Union with a population above 500 million.

Romania has 14 international airports and 8 large ports, with 130 direct flights to 31 countries and 76 destinations worldwide. The biggest port of Romania where the Danube River meets the Black Sea, Constanta, is known as the deepest and biggest port of the Black Sea.

Türk Loydu aims to grow in Romania, a country where it has served for many years, and meet the demand for Türk Loydu’s services in both Romania and the neighbor countries.











# OTHER FOUNDATION ACTIVITIES





### TÜRK LOYDU FOUNDATION OVERVIEW

The meeting held by a committee consisting of the representatives of the Association of Shipbuilders and Repairers, Association of the Insurance And Reinsurance Companies of Turkey, International Voyages Association Istanbul Chamber of Industry, Maritime Bank, Ereğli Demir Çelik Fabrikaları TAŞ, Ministry of Commerce and ITU under the leadership of TMMOB Chamber of Naval Architects and Marine Engineers, on February 27, 1962 in Galata Passenger Lounge, made history as the first general assembly of Türk Loydu. In his opening speech at the first General Assembly of Türk Loydu, Zeyyad Parlar, Chairman of the Entrepreneurs' Standing Committee, clearly stated the basic principles of Turk Loydu: "Türk Loydu will not be different from other well-known classification societies. Türk Loydu will have two principles. One is technique and science, and the other is honesty and objectiveness. The principles have been designed so as to keep the establishment on these two paths. Türk Loydu will make efforts to be the most honest consultant on which insurers, ship and boat owners, shipbuilders and repairers, and relevant government authorities can rely. It will be the most reliable and confident partner of these institutions in technical matters. They will have a friend with technical and scientific knowledge, to whom they can believe in the face of problems they may encounter." Türk Loydu, once the dream of a group of individuals with a big vision from engineering, maritime and insurance sectors, who believed in the workforce of our country, who relied on scientific and technological knowledge, ethical and moral principles, and who started in a rented room, is now a real, active and effective classification society, not only in our country but also in our region. It is about to celebrate its 60th year with a professional staff of more than



160 persons in its modern facilities, with a fleet of classed ships of nearly 1 million GT, new shipbuilding ranging from civilian to military ships, industrial plants from pipelines to refineries, and steel construction inspections from storage tanks to stadiums and suspension bridges.

Türk Loydu has created an organization which has obtained international accreditations in parallel to its growth and development in 55 years, high performance in the statistics of port state inspections, high quality standards placed on the top of the class lists, and is authorized by various flag states. Thanks to its organization which has been open to scientific and technological development since the day of its foundation, and with its unique new-generation rules created in cooperation with universities, knowledge and high quality standards, Türk Loydu is listed among the classification societies of the world.

### TÜRK LOYDU IN WORLD MARITIME UNIVERSITY

Türk Loydu was represented in the "Marine Energy 2017" Conference organized on January 24-25, 2017 at World



Maritime University in Malmö, Sweden. Chairman of the Board of Türk Loydu Foundation, Cem Melikoğlu, made a speech after Cleopatra Doumbia-Henry, President of World Maritime University, and Ki-tack Lim, General Secretary of the International Maritime Organization, and emphasized the importance of measures for reduction of greenhouse emissions by mentioning the environmental factors that affect the world maritime sector.

In his opening speech, our Foundation Chairman Cem Melikoğlu stated that the classification societies are in a critical position since they play the role of a bridge between ship owners and operators, shipbuilding sector and universities, and they are among the most important partners for the maritime sector to advance in consideration of the environmental concerns. The participants listened with interest as our Foundation Chairman made his speech. Melikoğlu mentioned their responsibility as a candidate member of the International Association of Classification Societies, and that in this sense, they provide all possible support to the shipbuilding sector and ship owners. During Marener 2017 Conference, the theory, practice and applications of the Marine Energy Management were discussed, and a forum was created to examine the opportunities and challenges in the field of marine energy to create an energy efficient and low carbon future for all partners and the maritime industry. The guests showed great interest in Türk Loydu's booth in the Conference Hall of the World Maritime University, and obtained information about Türk Loydu and its services.

The purpose of the World Maritime University, established in 1983 with the decision of the International Maritime Organization Council, is to achieve and exceed the objectives of the International Maritime Organization and member countries to ensure safe, secure and efficient transportation on clean oceans by way of training, research and capacity development.

## THE ANTARCTIC SEMINAR AT TÜRK

Prof. Dr. Bayram ÖZTÜRK, faculty member of Istanbul University and the Founding Chairman of Turkish Marine Research Foundation (TÜDAV), who conducted scientific studies for four months in the hardest to reach continent of the world, Antarctica, shared his experiences in the glacial continent with Türk Loydu employees with the seminar organized at Türk Loydu on January 26, 2017.

Prof. Dr. Bayram ÖZTÜRK carried out examinations with regard to the causes of global warming, alien species, protected areas, and fishing in Antarctica, the glacial continent with still undiscovered secrets and followed by scientists, and pioneered the involvement of Turkish scientists in these studies. Prof. Dr. ÖZTÜRK was the head of the first Turkish research expedition made in 2016.

Türk Loydu employees showed great interest to the seminar where Prof. Dr. Bayram ÖZTÜRK gave information about his studies in Antarctica and his findings in these studies. At the end of the seminar, Chairman of the Board of Türk Loydu Foundation Cem MELİKOĞLU thanked Prof. Dr. Bayram ÖZTÜRK with a plaque.







Our Foundation Chairman stated that he follows the studies of Prof. Dr. Bayram ÖZTÜRK in Antarctica, and wished him success.

### SCHOLARSHIPS GIVEN BY TÜRK LOYDU IN 2017

Türk Loydu continued in 2017 to award non-refundable scholarships and education grants to undergraduate and graduate students studying in higher education institutions within the scope of its areas of activity. The purpose of our non-refundable scholarships and education grants is to fulfill our social responsibility by contributing to our sectors and the education of human resources beneficial for our country. The non-refundable scholarships and education grants are given monthly for nine months from the beginning (October) to the end (June) of each academic year. A total of 145 students, determined at the beginning of the 2016/2017 Academic Year and studying in undergraduate and graduate programs, were given non-refundable scholarships for the first six months of 2017. Within the frame of our Scholarship Regulations, it was decided to continue giving scholarships of a total of 95 students from this academic year in the 2017/2018 Academic Year, and their scholarships were given in the last three months of 2017. The total number of scholarship quotas at the beginning of 2017/2018 Academic Year is 165, the same with the previous Academic Year. At the beginning of the 2017/2018 Academic Year, within the scope of Foundation's Scholarship Regulations, the applications for available undergraduate scholarship quotas

were accepted from the higher education institutions with granted rights to scholarship quota, and the professional organizations with reserved quotas.

The candidate applications which were two times of the reserved scholarship quota were evaluated within the frame of the Scholarship Regulations. The applications for an undergraduate scholarship were evaluated according to the preliminary assessment criteria, sorted according to quotas, and the candidate scholars were asked to submit the necessary documents to verify the declared information. Together with the students who received a scholarship in the 2016/2017 Academic Year, and deemed suitable to continue receiving their scholarship in the 2017/2018 Academic Year pursuant to our Scholarship Regulations, our foundation awarded non-refundable scholarships to a total of 154 students consisting of 138 undergraduate, 3 graduate, and 13 postgraduate students, in the first three months of the 2017/2018 Academic Year (October, November, December). The requirements related to development, research and development, and other areas of activity of Türk Loydu are taken into consideration regarding the graduate and postgraduate scholarship applications.

### SUPPORTS PROVIDED BY TÜRK LOYDU IN 2017

The surplus revenues after taxes obtained by the companies of TÜRK LOYDU FOUNDATION are transferred to the foundation. This revenue is transferred back to the related

sectors and activities in line with the noble aims and objectives of the Foundation.

### **R&D Supports:**

Türk Loydu Foundation also provides special R&D supports to those who will conduct postgraduate and academic-level researches in the relevant fields and sectors. Türk Loydu Foundation provides support to the R&D marine projects and activities which research and develop new technologies and contribute to the Turkish maritime industry, within the bounds of possibilities.

- More effective international representation of Turkish Maritime Industry was ensured by providing support to the academic experts recommended by MTMAC for their participation in the 4th Term SDC (Ship Design and Construction) Meeting, the IMO Sub-Committee meetings held in London on February 13-17, 2017.
- We provided support to ITU ROV and YTU GEMDEK ROV Teams for the Unmanned Underwater Vehicle (ROV) project studies.
- We provided support to the Waterbike Teams of ITU, KTU and Piri Reis University, which train for the “International Waterbike Regatta” organized in Jeziorak Lake at Itawa, Poland on May 25-29, 2017.
- Financial support was provided to YTU's Solar Powered Vessel Project.
- Financial support was provided for the 6th National Ship and Yacht Design Competition organized by the Union of Ship and Yacht Exporters. The award ceremony of this competition was held on October 27, 2017.
- Financial support was provided for the Marine Engineering Week and Chamber Night organized by TMMOB Chamber of Marine Engineers on December 14-16, 2017.

- We provided support to “Yakamoz 2017 Sea and Women Symposium”.
- We provided support for the “Marine Engineering Summit” organized by YTU on March 29-30, 2017.
- We provided support to the Maritime Students Association (DODER) which organized the 18 Mermaids Congress held in Antalya on April 27-30, 2017.
- We supported the 3rd International Shipbuilding and Maritime Symposium planned to be held by YTU.
- We provided support to ITU, Faculty of Naval Architecture and Ocean Engineering, for publication of the book titled “İstanbul'un Fethinden Günümüze Tersanelerimiz ve Denizcilik Kuruluşlarımız” by the retired faculty member Prof. Dr. Reşat Baykal.
- We provided support for DEFAV's 22th Solidarity Night organized on May 20, 2017.
- We provided financial support for two 1:10 scale model including the construction details of 1 container and 1 dry cargo ship built by ITU-GIMDER, and made suggestions to follow up the new and modern technologies and carry out similar works also on current ship types (such as LNG ships).
- We provided support for the “Green Port Introductory Film” prepared for the “Green Port Certificate Ceremony” organized by the Ministry of Transport, Maritime Affairs and Communication on 29.06.2017.
- We provided support for the 12th International Golden Anchor Maritime Success Awards Ceremony organized by the Maritime News Agency on September 8, 2017.
- Financial support was provided for the 6th National Ship and Yacht Design Competition organized by the Union of Ship and Yacht Exporters. The award ceremony of this competition was held on October 27, 2017.





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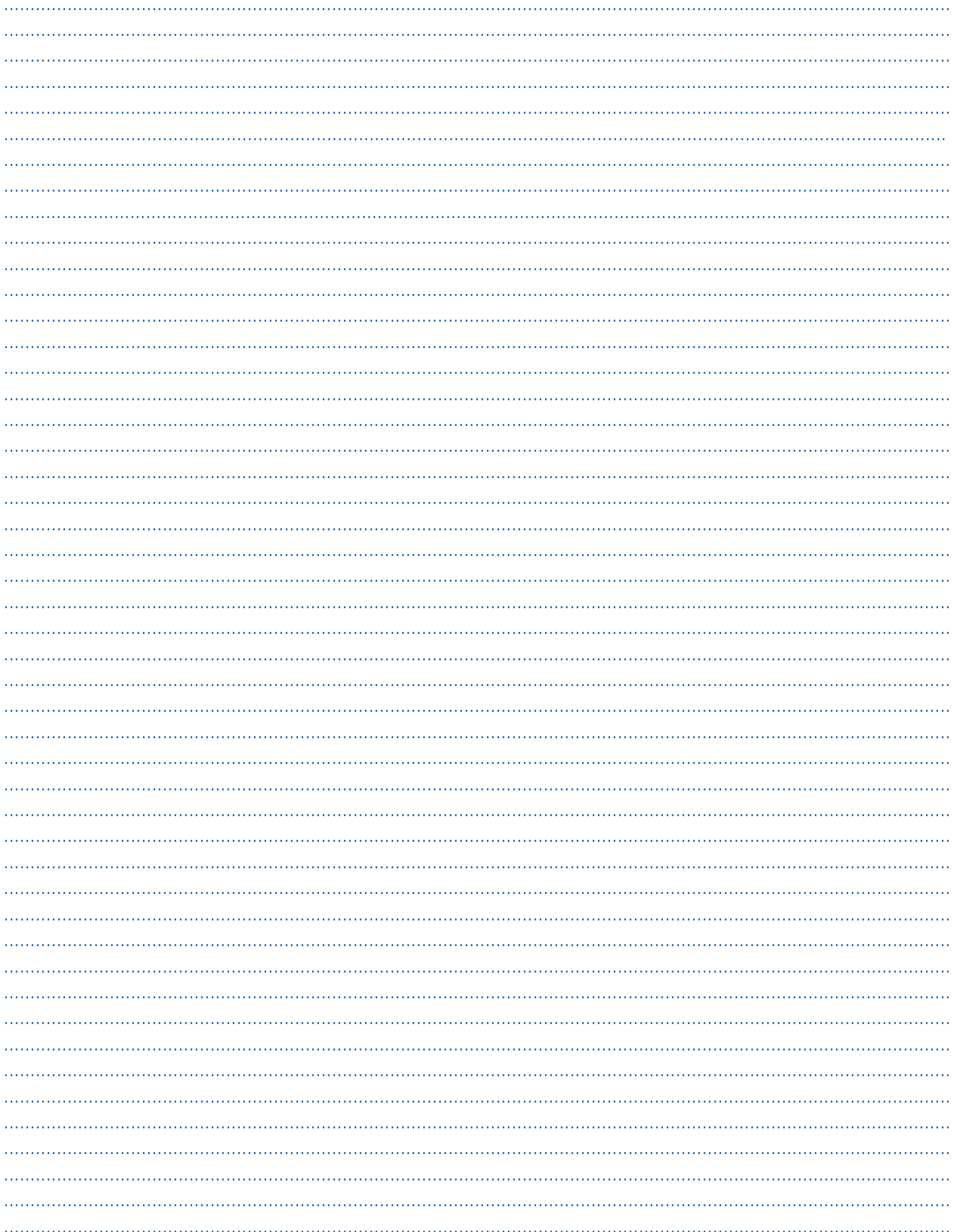






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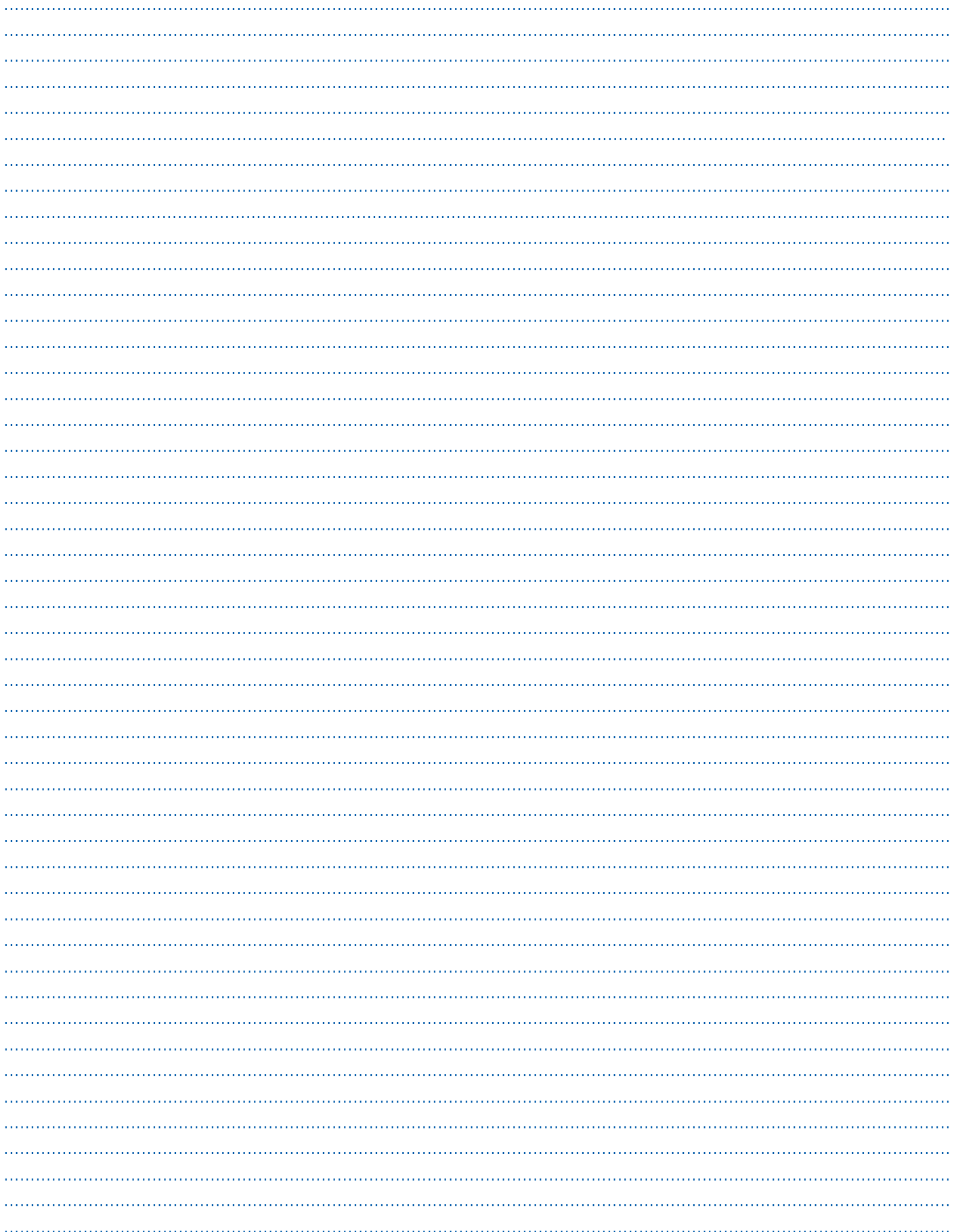






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