



# NAVAL SHIP CLASSIFICATION SERVICES





**TÜRK LOYDU**

*Naval Ship Classification Services*





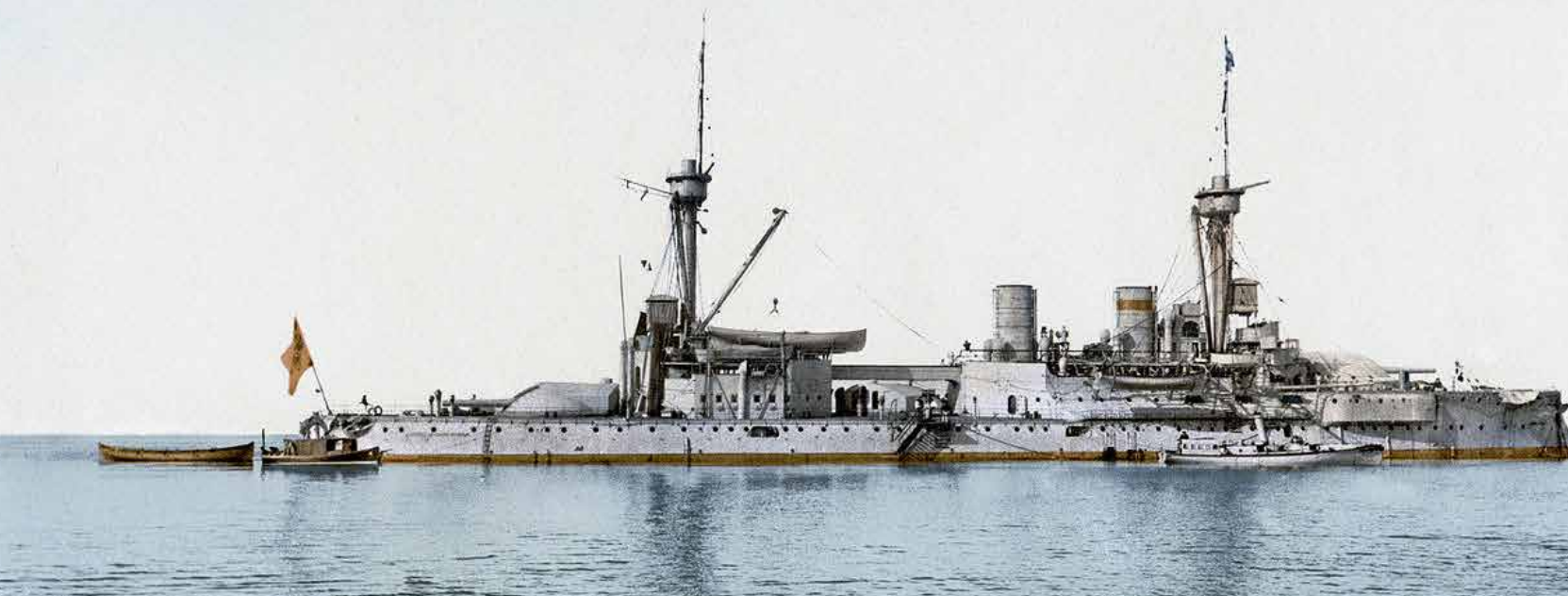
# *Our Common Goal Our Common Future*

Foundation of Türk Loydu was held by the most important institutions of our country in 1962 with the mission of implementing the technical progress in the maritime and industrial sectors in Turkey. Türk Loydu has been established by UCTEA Chamber of Naval Architects and Marine Engineers (Turkish), with the participation of many valued stakeholders such as 'Turkish Union of Insurance and Reinsurance Companies', 'The Union of Chambers and Commodity Exchanges of Turkey (TOBB)' 'Chamber of Shipping', 'Istanbul Chamber of Industry', 'Union of Chambers of Turkish Engineers and Architects (TMMOB)', 'Turkish Ship Owners Association', 'Turkish Shipbuilders' Association (GİSBİR)', and today known as an internationally recognized organization serving globally in the field of "Classification and Conformity Assessment". Türk Loydu plays an important role in shaping the future in the sector by following the developments in the marine and industrial sectors in the world starting from the stages of the constitution of rules and standards, and by consistently informing the stakeholder sectors.



# Türk Loydu in Naval Ship Projects

If it is questioned the ability to build a national naval ship in Turkey is important, it will be useful to remind once again this recent fact that is well known by the old generation but is forgotten today. The Ottoman Empire had lately realized its weakness in the seas and ordered two naval ships 'Dreadnoughts' to British shipyards, most of which were financed through campaigns or voluntary money collected from the public. Unfortunately, these ships were not handed over to the Ottoman Empire- on the pretext of the war that had not begun- even though the construction was completed and the money was paid. It is certain that this negative situation experienced a great shock to every part of the Ottoman Empire, its officers, intellectuals and people! A similar situation was experienced when it came to the agenda of military intervention in Cyprus to protect the rights of Turks living in the region. At that time also, it was experienced that we did not have a fleet to land amphibians in Cyprus! Although very serious steps were taken in the construction of national naval ships during the Republic period, the most important result-oriented progress is the establishment of the Undersecretariat of Defense Industry and the implementation of the national ship "MILGEM" Project. One of the most important pillars of this breakthrough is the development of naval shipbuilding capability of private sector industrialist.



As Türk Loydu, we proudly took part in every stage of the process that began with the classification of 'TCG Yarbay Kudret Güngör', the first naval ship constructed by the private sector, at Sedef Shipyard in 1996. Today, a wide range of ships such as combat ships, helicopter transport ships, patrol boats, landing ships, special purpose ships (submarine rescue ship, rescue and towing ships), supply ships at sea, military tankers, training boats can be constructed with national designs and significant local contribution in private shipyards, under the supervision of 'Türk Loydu' is an expected result of successful policies implemented over the last 20 years.

It is a very correct decision to choose our national classification society Türk Loydu as the institution to be trusted in the control and surveillance areas for the renewal of the Turkish Navy fleet in private sector shipyards. Since its establishment in 1962, Türk Loydu has been establishing its rules, providing experience and increasing its performance with an acceleration that has been rising to this day. Türk Loydu, which was established in 1962 with a very limited staff and budget, is at the service of the Turkish military shipbuilding industry and the Turkish Naval Forces with its reliable, independent and expert form, with more than 200 expert technical personnel, original rules, foreign offices that it started to establish. If a national ship being constructed in Turkey, classification activities should be definitely covered by Türk Loydu. There are two main reasons for this: first and foremost is the issue of national security. Keeping national design information in our country is a priority that leaves no room for discussion. The second is that the knowledge and experience gained remains in the country. We shouldn't forget that; 'Experience is the biggest but most expensive teacher. Mistakes, repetitions and delays made are enormous savings if they are actually evaluated well.'



# Why Naval Ships Should Be Constructed Under the Supervision of a Classification Society

With the classification of naval ships, an atmosphere of trust is created that will protect all military parties. Taskmasters (Presidency of Republic of Turkey, Presidency of Defense Industries), shipyards, sub-industrialists and utilize (Turkish Naval Forces) will benefit from the environment of trust created by the classification. At the same time, while ensuring the safety of the ship, the risk of environmental pollution will also be secured.

Additionally;

- 1- Over time, the structure of naval ships rapidly began to resemble commercial ships. Experiences gained in commercial ships are also used in naval ships.
- 2- A wide range of materials and equipment certification is carried out by Classification Societies. At this stage, the certification process for naval ships is a very important factor to increase security.
- 3- Classified merchant shipbuilding history has raised the standards in the industry working on this issue. The rising standards will also be used in military projects.
- 4- Independent auditing from the chain of command will make a direct and positive contribution to the final product quality.







# INSA

## *International Naval Safety Association*

### ***Council Membership***

International Naval Ship Association (INSA), is an important international organization working on maritime safety of the defense industry, an association formed to ensure and improve the activity in the field of ship safety in NATO with the participation of navies and classification societies. INSA has undertaken the development of the Military Ship Code (ANEP-77), which determines the life and property safety requirements of naval ships during peace conditions, and the Naval Submarine Code, which has been accelerated in recent years. In addition to these codes, the Naval Boat Code has started to work as a new rule. These codes aim to determine the safety rules of military ships in the commercial field similar to SOLAS. Türk Loydu, a candidate for the first council of INSA -which transformed into a structure similar to the organizational structure of the International Maritime Organization (IMO) with the changes made in the management structure in 2019-, was elected as a council member of INSA at the first council. Türk Loydu continues to work and contribute in sub-technical working groups in addition to the council works.

**INSA**  
INTERNATIONAL NAVAL  
SAFETY ASSOCIATION





# **NSCA**

## *Naval Ship Classification Association*

### *Presidency*

Naval Ship Classification Association (NSCA) is another international organization of the defense industry. NSCA was established in 2001 in order to coordinate NATO member countries and classification societies working in the military field, which consists of seven members including Türk Loydu, ABS, DNVGL and LR as of 2019. Türk Loydu joined to NSCA in 2004 and became an active member since then by providing important contributions to the work groups and the developing naval ship rules. Türk Loydu, who became the President of NSCA as of 2020, plays an active role in the establishment of international rules of naval ships in both associations.



# **NSCA**

# Türk Loydu in Classification

## Responsible for;

Strength,  
Stability,  
Fire safety,  
Escape routes, safety of lives, and evacuation analysis,  
Engine, propulsion, wheelhouse, maneuver,  
Pollution prevention,  
Supply and equipment certification,  
Electricity and navigation,  
Ventilation (incl. Nuclear Biological Chemical Air filtration),  
Paint.

## Not Responsible for;

Weapon electronic systems,  
Communication, radar, sonar, software,  
General disposition,  
Operational requests (speed, maneuver etc.)  
Number of staff, deployment, living conditions.



# Why should work with Türk Loydu?

Considering each naval ship has strategic importance, the military authority will want to ensure that these ships are designed and constructed according to military needs, suitable for their intended use, safe, durable, and performance.

## What are the advantages of working with Türk Loydu?

- Türk Loydu is a member of INSA (International Naval Safety Association) and NSCA (Naval Ship Classification Association).
- Türk Loydu has more than 58 years of experience in naval ship surveys.
- Türk Loydu has experienced and expert personnel for the certification of supplies and equipments of naval ships.
- Türk Loydu provides services in all stages of naval ship certification.
- Expert staff of Türk Loydu coordinates with all parties of the projects as a solution partner at all stages of the construction. Recommendations also made in the projects that are still in the design phase.
- Our surveyors carry out effective inspections during the construction phase to ensure that the projects comply with Türk Loydu rules.
- Türk Loydu is customer oriented. Provides quality service at reasonable financial levels.
- Türk Loydu has a wide range of references in naval ships.
- Türk Loydu has the naval ship construction attendance experience not limited to domestic, but also abroad (Turkmenistan, Qatar, Pakistan, Libya).
- There is close cooperation with universities and other partners.
- Türk Loydu applies the 'Naval Ship Code' and the demands of the Military Authority in coordination with the parties when necessary while applying the naval ship rules.
- Especially on auxiliary class ships, Türk Loydu Commercial Ship Rules can also be applied.
- A wide range of products from pipe components to main engines have various Türk Loydu Certificates.
- Türk Loydu is a classification society with fast and reliable services which you will get answers to your questions in a short while.
- Türk Loydu is a classification society from which you can get help for flexibility in military ship classification services -by obtaining the opinion of the military authority- after analysis and calculations.
- Türk Loydu is a classification society where risk analyzes is made on a rule that will not be applied during the construction phase, alternative rules are also examined and/or verified by direct calculation methods.



# No Institution Can Provide the Service Provided by Türk Loydu

Classification service cannot be provided by another institution. This situation is not a result of the inadequacy of the technical capabilities and personnel of other institutions and the lack of knowledge. Classification is a whole and a systematic discipline.

## What are the Properties that a Classification Institution Should Have?

- Accreditation and sustainability,
- Having its own rules which regularly updating,
- Having an independent management and organizational structure,
- To be detached,
- Independence of staff from any pressure,
- Having code of ethics,
- Having educated and qualified employees with defined responsibilities and powers,
- having a systematic qualification of employees,
- Being transparent.

**Finally, we would like to remind you that the services provided by Türk Loydu cannot be divided; design approval, personnel certification, supply certification and survey services should all be provided together for the best performance.**





# TÜRK LOYDU

Reference Projects

**LHD**

**Multi-Purpose Amphibious Assault Ship**





# TCG ANADOLU

The block steel construction production of the TCG Anadolu Multi-Purpose Amphibious Assault Ship, -which is among the aircraft carrier class, accepted as the pitch in the development of Turkish Defense Industry- was finalized in 2019, the union of the blocks on the slipway was accelerated and the ship was launched. TCG Anadolu can be used in the Aegean, Black Sea and Mediterranean operation areas and, when necessary, the Indian Ocean (north of the Arabian Peninsula, west of India) and the Atlantic Ocean (west of Europe, northwest of Africa). In addition to having a platform where various types and sizes air elements -including our national pride Atak helicopter-, can perform full-capacity operations even in heavy sea and weather conditions, TCG Anadolu enables the rotary Osprey aircraft, which can operate day and night with the heaviest NATO helicopters in the inventory with the flight deck to provided, and ship will be able to participate in landing operations with the landing vehicles she will carry in her pool. The Multi-Purpose Amphibious Assault Ship TCG Anadolu will also be able to transport a fully equipped battalion troops, up to 6 Altay tanks and mechanized support vehicles to crisis areas with full protection from air and sea without home base support. TCG Anadolu is designed with an surgery room will have an infirmary / hospital with at least 30 beds, including x-ray devices, dental treatment units, intensive care and infection rooms, and will be able to take part in humanitarian operations and perform natural disaster relief tasks. Particulars of the Multi-Purpose Amphibious Assault Ship TCG Anadolu, which will bear the title of the largest naval platform that will take place in the inventory of the Turkish Navy, are as follows;

<b>Dimensions (m)</b>	: 230.8 x 32 x 27.5
<b>Displacement (ton)</b>	: 27.408
<b>Main Engine</b>	: 5 x 7600 kW D/G 2 x Bow Thruster 2 x Stern Thruster
<b>Max. Speed (kts)</b>	: 21.2
<b>Construction Shipyard</b>	: SEDEF Shipyard
<b>Ship's Name</b>	: TCG Anadolu

# LST

## Amphibious Tank Landing Craft



<b>Dimensions (m)</b>	: 138.75 x 19.6 x 12.5
<b>Displacement (ton)</b>	: 7.254
<b>Main Engine</b>	: 4 x 2880 kW 2 x CPP 1 x 500 kW BT
<b>Max. Speed (kts)</b>	: 18.5
<b>Construction Shipyard</b>	: ADİK Shipyard
<b>Ship's Name</b>	: TCG Bayraktar TCG Sancaktar
<b>Quantity</b>	: 2

# KURYED

## Rescue and Towing Ship



<b>Dimensions (m)</b>	: 68.2 x 14.2 x 6.5
<b>Displacement (ton)</b>	: 2.400
<b>Main Engine</b>	: 2 x 3536 kW 2 x CPP
<b>Max. Speed (kts)</b>	: 18
<b>Construction Shipyard</b>	: İSTANBUL Shipyard
<b>Ship's Name</b>	: TCG Akın - TCG Işın

# LDG

## Logistic Support Ship



<b>Dimensions (m)</b>	: 105.42 x 16.8 x 8.4
<b>Displacement (ton)</b>	: 6.200
<b>Main Engine</b>	: 2 x 1520 kW 2 x CPP
<b>Max. Speed (kts)</b>	: 12
<b>Construction Shipyard</b>	: SELAH Shipyard
<b>Ship's name</b>	: TCG Yzb. Güngör Durmuş TCG Ütgm. Arif Ekmekçi
<b>Quantity</b>	: 2

# MOSHIP

## Submarine Rescue Mother Ship



<b>Dimensions (m)</b>	: 90.8 x 19 x 7.8
<b>Displacement (ton)</b>	: 4.200
<b>Main Engine</b>	: 4 x 3430 kW
<b>Max. Speed (kts)</b>	: 18
<b>Construction Shipyard</b>	: İSTANBUL Shipyard
<b>Ship's Name</b>	: TCG Alemdar



# LCT

## High-Speed Amphibious Ship



<b>Dimensions (m)</b>	: 79.85 x 11.7 x 5.2
<b>Displacement (ton)</b>	: 1156
<b>Main Engine</b>	: 2 x 2320 kW
<b>Max. Speed (kts)</b>	: 18
<b>Construction Shipyard</b>	: ADİK Shipyard
<b>Ship's Name</b>	: TCG Ç151 - Ç158
<b>Quantity</b>	: 8

# YTKB

## New Type Patrol Boat



<b>Dimensions (m)</b>	: 56.9 x 8.9 x 5.2
<b>Displacement (ton)</b>	: 377
<b>Main Engine</b>	: 2 x 2720 kW 2 x FPP
<b>Max. Speed (kts)</b>	: 25
<b>Construction Shipyard</b>	: DEARSAN Shipyard
<b>Ship's Name</b>	: YTKB 1 - 16 New Type Patrol Boat
<b>Quantity</b>	: 16

# Turkish Coast Guard Control Boat



<b>Dimensions (m)</b>	: 11.98 x 3.74 x 0.80
<b>Displacement (ton)</b>	: 12.85
<b>Main Engine</b>	: 2 x Volvo Penta D8 - 450
<b>Max. Speed (kts)</b>	: 35
<b>Construction Shipyard</b>	: ARES Shipyard
<b>Ship's Name</b>	: 35 KB 1 - 35 KB 122

# DİMDEĞ Sea Supply, Battle and Support Ship



<b>Dimensions (m)</b>	: 199.9 x 24.4 x 7
<b>Displacement (ton)</b>	: 22.000
<b>Main Engine</b>	: 2 x 6000 kW 1150 rpm
<b>Max. Speed (kts)</b>	: 24
<b>Construction Shipyard</b>	: SEFİNE Shipyard

# **NATIONAL SHIP ADA CLASS CORVETTES**





# MİLGEM

For ADA Class National Ship projects (MİLGEM 1-4), a Design Examination Certificate was issued by Türk Loydu on April 06, 2011 for TCG HEYBELİADA (F-511), TCG BÜYÜKADA (F-512), TCG BURGAZADA (F-513) and TCG KINALIADA (F-514), these ships were built in Istanbul Shipyard Command and delivered to the Naval Forces Command. Afterwards, a Design Approval Agreement was signed between Türk Loydu and Turkish Defense Technology and Engineering Company (STM) on July, 17 2017 for the İ-Class Frigate (MİLGEM 5-8) project, which will be built entirely at the Istanbul Shipyard Command, and the construction of the first ship continues. With the experience gained from various types of military ship projects that have been providing classification service for nearly 20 years, including 4 Ada class corvettes, a Classification Agreement for 4 MİLGEM Corvettes was signed between Türk Loydu and ASFAT (Military Factory and Shipyard Management Inc.) on July 23, 2019. Two of these corvettes will be constructed in Istanbul Shipyard Command and remaining two in Karachi, Pakistan. With this project, the largest exports to the Republic of Turkey will take place at a time. Pakistan MİLGEM Corvettes will have a length of 100 meters, beam of 14 meters, and their maximum speed is 26 knots. In addition, the ships are designed to stay in water for 15 days continuously, and the ships are planned to be delivered to the Pakistan Navy between 2023 and 2025. The project, in which Aselsan and Havelsan will realize the supply and integration of combat systems, will take an important place among the Türk Loydu Classified Naval Ship projects. Particulars of MİLGEM corvette as follows;

<b>Dimensions (m)</b>	: 99.56 x 14.4 x 3.75
<b>Displacement (ton)</b>	: 2.300
<b>Main Engine</b>	: 2 x 4320kW MTU 1 x GT 2 x CPP
<b>Max. Speed (kts)</b>	: 30
<b>Construction Shipyard</b>	: Istanbul Shipyard Command (Türk Loydu Design Approval Certification)
<b>Ship's Name</b>	: TCG Heybeliada TCG Büyükada TCG Burgazada TCG Kinaliada

# Türkmenistan Corvette



<b>Dimensions (m)</b>	: 91.4 x 13.3 x 5.66
<b>Displacement (ton)</b>	: 1600
<b>Main Engine</b>	: 4 x 4100 kW 2 x CPP
<b>Max. Speed (kts)</b>	: 26
<b>Construction Shipyard</b>	: DEARSAN Shipyard

# Qatar Sea Forces Cadet Training Ships



<b>Dimensions (m)</b>	: 89.59 x 14.18 x 6.8
<b>Displacement (ton)</b>	: 2033
<b>Main Engine</b>	: 2 x 5000 kW 2 x CPP 1 x Bow Thruster 2 x Fin Stabilizer
<b>Max. Speed (kts)</b>	: 15
<b>Construction Shipyard</b>	: ADİK Shipyard
<b>Quantity</b>	: 2

# TRNC

## Patrol Ship



<b>Dimensions (m)</b>	: 13.0 x 3.76 x 1.0
<b>Max. Speed (kts)</b>	: 35
<b>Main Engine</b>	: 2 x 460 kW
<b>Construction Shipyard</b>	: ARES Shipyard
<b>Ship's Name</b>	: Bereketçi Sakarya Bozdağ
<b>Quantity</b>	: 3

# TCG UFUK

## Test and Training Ship



<b>Dimensions (m)</b>	: 99.56 x 12.78 x 3.95
<b>Displacement (ton)</b>	: 2498
<b>Main Machine</b>	: 4300 kW 2100 rpm
<b>Max. Speed (kts)</b>	: 18
<b>Construction Shipyard</b>	: İSTANBUL Shipyard

# PAKISTAN MILGEM

## Corvette



<b>Dimensions (m)</b>	: 108.2 x 14.8 x 4.05
<b>Displacement (ton)</b>	: 2926.6
<b>Main Engine</b>	: 2 x 4300 kW 2100 rpm
<b>Max. Speed (kts)</b>	: 26
<b>Construction Shipyard</b>	: Istanbul Shipyard Command Karachi Shipyard
<b>Quantity</b>	: 4

## Emergency Response and Diving Training Boat



<b>Dimensions (m)</b>	: 35.73 x 8 x 4
<b>Displacement (ton)</b>	: 254.3
<b>Main Engine</b>	: 2 x 1140 kW 2200 rpm
<b>Max. Speed (kts)</b>	: 16
<b>Construction Shipyard</b>	: DESAN Shipyard
<b>Ship's Name</b>	: ACMB - DALGIÇ 1 - DALGIÇ 2
<b>Quantity</b>	: 2



# HOVERCRAFT



**Dimensions (m)** : 22 x 9.26 x 0.8  
**Main Engine** : 2 x 550 kW  
**Max. Speed (kts)** : 40  
**Construction Shipyard** : TURKMENBASHI Shipyard

# ZARPLY Tugboat



**Dimensions (m)** : 16 x 6 x 2.90  
**Main Engine** : 2 x 551 kW  
**Max. Speed (kts)** : 18  
**Construction Shipyard** : TURKMENBASHI Shipyard

# LCM

I - 2 - 3 - 4



<b>Dimensions (m)</b>	: 25.9 x 6.90 x 2.90
<b>Displacement (ton)</b>	: 139
<b>Main Engine</b>	: 2 x 1850 kW
<b>Max. Speed (kts)</b>	: 15 - 20
<b>Construction Shipyard</b>	: SEDEF Shipyard
<b>Quantity</b>	: 4

# LCVP

I-2



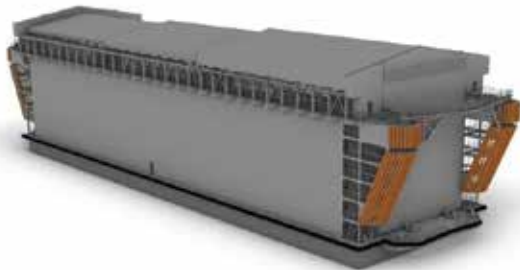
<b>Dimensions (m)</b>	: 15.7 x 4.3 x 1.1
<b>Displacement (ton)</b>	: 25.6
<b>Main Engine</b>	: 2 x 515 kW 2300 rpm
<b>Max. Speed (kts)</b>	: 15-20
<b>Construction Shipyard</b>	: ADİK Shipyard

# Military Floating Dock



<b>Dimensions (m)</b>	: 175.6 x 43.5 x 3.40
<b>Displacement (ton)</b>	: 20027.784
<b>Generator</b>	: 2128 kW
<b>Lifting Capacity</b>	: 10.000
<b>Construction Shipyard</b>	: HATSAN Shipyard
<b>Ship's Name</b>	: Y-137

# Submarine Floating Dock



<b>Dimensions(m)</b>	: 105 x 25.1 x 19.9
<b>Lifting Capacity</b>	: 3.000 Ton
<b>Generator</b>	: 4 x 750 kW
<b>Construction Shipyard</b>	: HİCİRİ ERCİLİ Shipyard

# High Speed Patrol Boat



**Dimensions (m)** : 18.0 x 4.8 x 1  
**Main Engine** : 2 x 810 kW  
**Max. Speed (kts)** : 35  
**Construction Shipyard** : ARES Shipyard  
**Ship's Name** : SAIF II - 16  
**Quantity** : 6

# Fast Response Boat



**Dimensions (m)** : 33.05 x 7.1 x 1.46  
**Main Engine** : 2 x 3440 kW  
**Max. Speed (kts)** : 45  
**Construction Shipyard** : TURKMENBASHI Shipyard  
**Quantity** : 6



# High Speed Patrol Boat

## HERCULES 75



<b>Dimensions (m)</b>	: 23.2 x 5.72 x 1.2
<b>Main Engine</b>	: 2 x 1220 kW
<b>Max. Speed (kts)</b>	: 38
<b>Construction Shipyard</b>	: ARES Shipyard
<b>Ship's Name</b>	: QC 710 - QC 714
<b>Quantity</b>	: 5

# High Speed Patrol Boat

## HERCULES 110



<b>Dimensions (m)</b>	: 33 x 7.5 x 1.45
<b>Main Engine</b>	: 3 x 1120 kW
<b>Max. Speed (kts)</b>	: 30
<b>Construction Shipyard</b>	: ARES Shipyard
<b>Ship's Name</b>	: QC 806 - QC 815
<b>Quantity</b>	: 10

# High Speed Patrol Boat

## HERCULES 150



<b>Dimensions (m)</b>	: 47.9 x 8.78 x 1.78
<b>Main Engine</b>	: 3 x 2240 kW
<b>Max. Speed (kts)</b>	: 36
<b>Construction Shipyard</b>	: ARES Shipyard
<b>Ship's Name</b>	: QC 901 - QC 902
<b>Quantity</b>	: 2

# Turkish Coast Guard

## Patrol Boat



<b>Dimensions (m)</b>	: 12.92 x 3.99 x 0.97
<b>Displacement (ton)</b>	: 14.04
<b>Main Engine</b>	: 2 x 426 kW
<b>Max. Speed (kts)</b>	: 35
<b>Construction Shipyard</b>	: ARES Shipyard
<b>Ship's Name</b>	: SAGET 26 - 35
<b>Quantity</b>	: 10

# CATAMARAN



**Dimensions (m)** : 17 x 6 x 1.9  
**Main Engine** : 2 x 441 kW  
**Max. Speed (kts)** : 18  
**Construction Shipyard** : TURKMENBASHI Shipyard

# KUWWATLY Tugboat



**Dimensions (m)** : 14.97 x 4.15 x 0.8  
**Main Engine** : 2 x 720 kW  
**Max. Speed (kts)** : 35  
**Construction Shipyard** : TURKMENBASHI Shipyard

# SERHET Class

## Patrol Boat



**Dimensions (m)** : 56.9 x 8.9 x 5.2  
**Displacement (ton)** : 377  
**Main Engine** : 2 x 2720 kW  
2 x FPP  
**Max. Speed (kts)** : 25  
**Construction Shipyard** : TURKMENBASHI  
Shipyard  
**Ship's Name** : SGSB I - 10  
**Quantity** : 10

# BARS Class

## Emergency Boat



**Dimensions (m)** : 14.97 x 13.20 x 4.15  
**Main Engine** : 2 x 720 kW  
**Max. Speed (kts)** : 40  
**Construction Shipyard** : TURKMENBASHI  
Shipyard  
**Quantity** : 10



# GUJURLY

## Tugboat



**Dimensions (m)** : 30.0 x 11.20 x 5.60  
**Main Engine** : 2 x 920 kW  
**Max. Speed (kts)** : 14  
**Construction Shipyard** : TURKMENBASHI Shipyard

# UMMAN

## Hydrographic Survey Ship



**Dimensions(m)** : 41.20 x 9.55 x 4.5  
**Main Engine** : 2 x 1000 kW  
**Max. Speed (kts)** : 12  
**Construction Shipyard** : TURKMENBASHI Shipyard

NOTES

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# TÜRK LOYDU

Independent, Impartial, Reliable, Expert...



Muayene  
TS EN ISO/IEC 17020  
AB-0005-M



Kalite Yönetim Sistemi  
TS EN ISO/IEC 17021-1  
AB-0001-YS



Çevre Yönetim Sistemi  
TS EN ISO/IEC 17021-1  
AB-0001-YS



Bilgi Güvenliği Y.S.  
TS EN ISO/IEC 17021-1  
AB-0001-YS



Sera Gazı Emisyonu  
TS EN ISO 14065:2013  
AB-0015-DK



Personel  
TS EN ISO/IEC 17024  
AB-0010-P



Ürün  
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AB-0046-U

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