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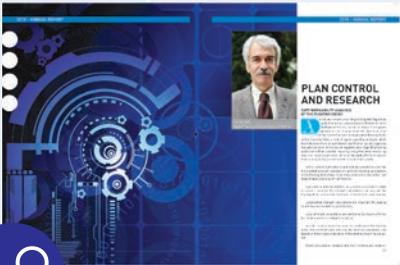
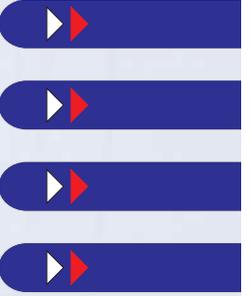
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### GENERAL MANAGER

Şevki BAKIRCI



In the year 2010, when trust is re-built and expansion is maintained again as a natural result of globalization and the development in communication; conformity assessment bodies, which secure life and property during national and international trade, developing and securing environmentally conscious industrial and transportation sectors, are established. The rule development activities for the Recognized Organizations (ROs) at IMO, EU new approach directives, the activities of [CE] notified body, conformity assessment bodies' mutual recognition agreements during accreditations across borders, and the change in the new membership rules at IACS have collectively made it necessary for conformity assessment bodies to be active internationally.

In today's economical arena, rapidly developing, and easily affected by global changes; sustainable growth and the supply of high quality service emerges as the top priority of conformity assessment bodies. The development of Türk Loydu within this period is rapidly continuing with the security provided by its expert staff and its principles, which conform to ethical values.

Türk Loydu is benefiting from the results of its training and specialization activities in 2010, and it has and developed from a national society into an international conformity assessment body.

As the activities regarding the progress in becoming an internationally recognized society in maritime industry continue, the stage of receiving confirmation of "Classification Society" according to IACS is fulfilled and therefore an important development has been reached through the IACS membership. It has been shown that the success is sustainable in Port State Control inspection statistics, and with the experience gained from the

classification of naval ships, Türk Loydu has become one of the leading classification societies serving in this area. Türk Loydu follows the international rules and convention developments very closely, and it has developed a new generation of Hull and Machinery rules unique to Türk Loydu in 2010, and it has brought these rules into use in all sectors.

In the industrial arena, Türk Loydu has reached critical capacity where it can render conformity assessment services on major projects required by our country. Along with steel constructions, storage tanks, pressured containers, boilers and pipelines, Türk Loydu has become a pioneer in our country for Energy Efficiency and Renewable Energy, which are the most important aspects of precautions against climate changes caused by global warming. Certification activities for industrial and service societies regarding energy efficiency and emission management systems in order to minimize the effects of climate change have begun. Together with the structural security activities rapid developments have been achieved on security of electrical and fire fighting systems.

Türk Loydu will continue to be the reassurance of all industry sectors with its expert and effective services, that are expanding every year as per life and property security, climate change and environment protection.

In parallel with the expansion in its field of activity, Türk Loydu Foundation has increased its contributions to scholarships, to conferences and academic activities, to education of technical staff, to protection of life and property on international platforms, and to technical studies on climate change and environment protection in the year 2010.

Prof. Dr. Mustafa INSEL

Chairman of the Board, Türk Loydu Foundation

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Şevki BAKIRCI  
General Manager of Türk Loydu

**T**ürk Loydu continued its activities with its motto of “provide high quality service” in 2010. As it is known, the leading place where Classification Society performances are measured and the results are exhibited are Port State Controls (PSC) made on the ports of the states which are party to the Paris Memorandum and the Paris Memorandum (Paris MoU) annual reports, where the results are announced.

In the “Paris MoU 2010 Report”, covering the PSC results of 3 years for the period between 2007 – 2009, it is stated that, for the period mentioned, ships that visited the ports of countries which are party to Memorandum, on the port state control inspections, on the evaluation made regarding the number of the ships detained due to classification society fault, Türk Loydu has left some IACS member classification societies behind to reach 6th place. Having been in 9th place 4 years ago, Türk Loydu has managed to maintain its “high performance classification society” status in 6th place for 3 successive years.

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Despite the economical crisis that emerged in 2008, taking the risk of a decrease in the numbers of the ships that are classified to maintain the status of “high performance classification society” for four successive years indicates that Türk Loydu gives importance and priority to service quality, life and property security and environmental safety.

While maintaining its status of “high performance classification society” Türk Loydu also keeps growing and developing, and it has given the first priority as a strategic plan to become an IACS – International Association of Classification Societies member. Within this scope and as a result of the activities started in 2008, Türk Loydu applied to IACS on September 30th, 2010; to initiate the membership process after the completion of necessary preparations and documents,. After IACS Council’s assessments of the documents submitted during the application process, IACS Secretariat has communicated a letter of confirmation regarding Türk Loydu’s “Classification Society Status” on January 14th, 2011. Since the notification of this decision, signifies the first stage of the IACS membership process , the next step is to conclude the last step of membership audit successfully and complete the membership process.

In the year 2010, the number of ships that were disclassed or suspended due to various reasons, were 135. Where, the number of the ships that entered into Türk Loydu classification within the year was 69. By the end of the year, the total number of ships classified above 100 GT was 542, holding 1,059,000 Gross Tonnage.



When speaking of fleets belonging to Türk Loydu classification, it brings to mind the very first ship, a towing boat named CAMİALTI, to be classified by Türk Loydu with registration number G-0001 in 1962, the year in which Türk Loydu was first established, and which is bought and will be exhibited on our Premises in Tuzla, after the conclusion of the necessary repair and renewal activities. CAMİALTI will be beneficial in reminding us the beginning of Türk Loydu’s journey in every new step and success accomplished in the future.

The first of the 16 New Type Patrol Boats in Türk Loydu classification that the Turkish Republic Undersecretariat for Defense Industries has ordered for the Turkish Naval Forces, was completed and delivered on December 27th, 2010. The construction of the 8 LCT type Assault Boats is ongoing, and the port tests for the first boat of this series has begun. Furthermore, sea trials for the

Milgem (National Ship) concept corvette HEYBELİADA, of which the plan approval services were carried out by Türk Loydu, are also continuing.

The fact that Türk Loydu was chosen for the ships that are ordered in the name of the Turkish Naval Forces, also increased



our certification activities regarding the products, material and companies significantly. After the type approval services given to two of the most important engine manufacturers; German MTU and Japanese YANMAR, type approval services for main engine of Belgian ABC Company have also reached the final stages.



Within the scope of the efforts of establishing rules unique to Türk Loydu; “Classification and Survey Rules”, “Hull Rules”, “Machinery Rules” were completed in 2010 and presented to the sector and to related parties for their opinions and evaluations.



The preparations for “Material Rules”, “Welding Rules” and “Electrical Installation Rules” are still continuing.

As a part of its yearly increasing and diversifying scope of accreditation, Türk Loydu has gained accreditation for Underwater Welding certification by TÜRKAK, as well as Steel Construction Welding certification and Steel Bridge Welding certification within the scope of ISO 17024 General requirements for bodies operating certification of persons.

Within the scope of ISO 17020 General Criteria for the Operation of Various Types of

Bodies Performing Inspection, Türk Loydu has been accredited by TÜRKAK for project approval of lifting and transporting equipments, and also on subjects regarding electrical cables, installations for earthing and lightning protection.

In 2010, Türk Loydu continued to implement its knowledge and experience on the manufacture and assembly of the steel constructions on new projects as well. Manufacture and assembly inspection services provided for the steel construction of “Türk Telekom Arena” stadium constructed for Galatasaray in Seyrantepe is among the major projects that are completed successfully

after the completion of the “Kayseri Kadir Has” and “Rize Şehir” stadiums,

The manufacture and assembly inspections of the steel constructions of the “Zorlu Center” project of that was commenced on the old highway land in Zincirlikuyu, İstanbulİstanbul; and also manufacture and assembly inspections of the steel constructions of the “Fenerbahçe Ülker Arena Sport Complex”, that was commenced in Ataşehir, İstanbulİstanbul; the “National Archives Site” project that was commenced in Kağıthane, İstanbulİstanbul; and the “Marmara Forum Shopping Mall” and “Haliç Metro Passing Bridge” that were commenced in İstanbulİstanbul are among the important projects that we have started in 2010.

According to the comprehensive agreement signed between Türkiye Petrolleri A.O. and Türk Loydu regarding periodical inspections of open sea platforms, five-yearly periodical inspections of the legged platform, which is situated 80m below sea level in the Black sea Akçakoca natural gas zone, have been completed. The third party inspection service for the capacity increase project of the Alsim Alarko Kırklareli Combined Natural Gas Cycle Power Plant is one of the important projects that we have completed in 2010.

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Tansel TİMUR  
Head of Maritime Industry Division

# MARITIME INDUSTRY

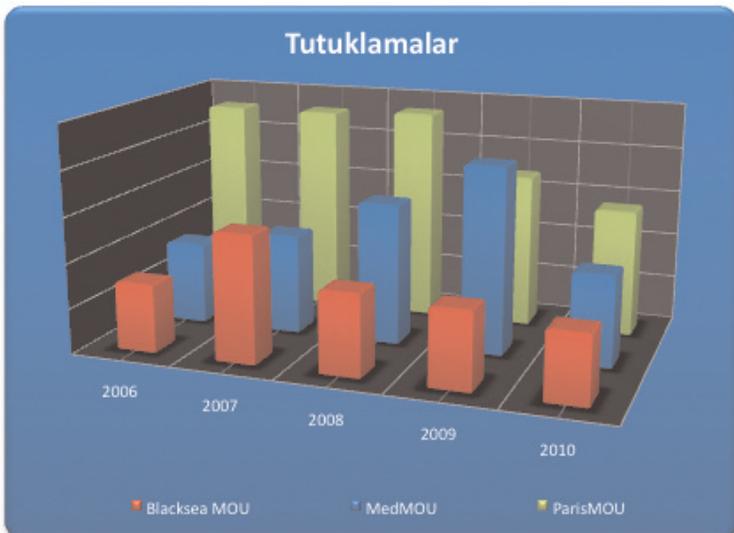
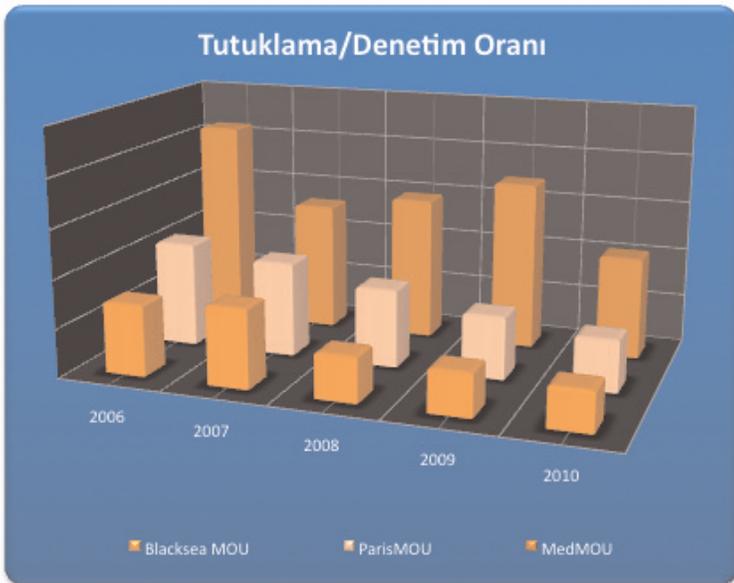
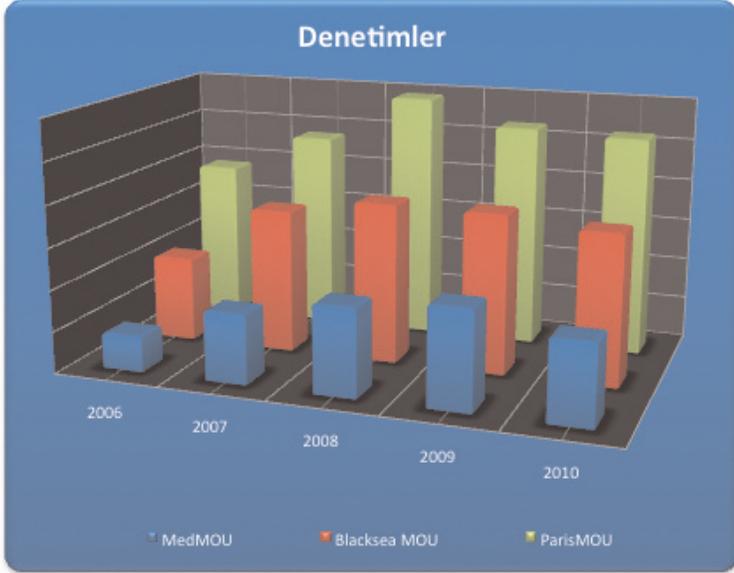
## PORT STATE CONTROL ACTIVITIES

According to the PSC inspection results, ships in the Türk Loydu fleet showed high performance in 2010. According to the Recognized Organization Performance Table covering the period between 2007 and 2009, published by Paris MoU in 2010, Türk Loydu has maintained its “High Performance” status, as it has for the past 4 years, and was in the 6th place as it was last year, over some IACS members.

Non-programmed survey scheme continued on target ships since 2009, whose PSC performance are evaluated and thus problems were detected and solutions are provided before causing any issues during PSC inspections. In addition, the evaluation of many ships in the Türk Loydu fleet has been carried out with the PSC perspective by broadening the scope of non-programmed surveys and applying them during the ISM audits.

Recognized Organization*		Inspections	Detentions	Low / medium limit	Medium / high limit	Excess factor	Performance level
Indian Register of Shipping	IRS	172	0	7	0	0,00	High
RINAVE Portuguesa	RP	75	0	4	0	-0,00	
Korean Register of Shipping (Korea Rep.of)	KRS	713	5	21	8	-0,49	
Polski Rejestr Statkow	PRS	1034	8	29	13	-0,58	
China Classification Society	CCS	1024	4	28	13	-1,10	
Russian Maritime Register of Shipping	RMRS	7769	48	176	135	-1,23	
Nippon Kaiji Kyokai	NKK	6558	27	150	112	-1,47	
Bureau Veritas (France)	BV	11897	43	264	212	-1,57	
<b>Turkish Loyd</b>	<b>TL</b>	<b>1497</b>	<b>3</b>	<b>39</b>	<b>21</b>	<b>-1,59</b>	
Lloyd's Register (UK)	LR	14748	51	323	266	-1,60	
American Bureau of Shipping (USA)	ABS	5454	13	127	92	-1,68	
Registro Italiano Navale	RINA	3127	5	76	49	-1,75	
Germanischer Lloyd	GL	14962	31	328	271	-1,76	
Det Norske Veritas	DNV	13278	26	293	239	-1,77	

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The cooperation with the Undersecretariat of Maritime Affairs broadened its perspective in 2010 even more: the trainees from the flag state and port states attended the ISM implementation and auditor courses within the Türk Loydu premises. As a part of this, the PSC auditors from the Novorossiysk and Tuapse ports of Russian Federation visited Türk Loydu on 3 and 8 November 2010 and were informed about the activities of our organization. Within this scope, on 6-8 April 2010, we took part in the 2010 Black Sea Memorandum Annual Committee Meeting in which Turkey was the host, and established close relations with the Maritime Administrations of those countries that have shores in the Black Sea, and strengthened Türk Loydu's institutional reputation in this area.

Within the scope of the activities realized internationally, various visits to the Greek Maritime Authority and Greek Ports Authorities were organized, between 7 – 10 June 2010. During these visits, dialogues regarding the activities of Türk Loydu on PSC issues were established.



### SVEP-TÜRK LOYDU SURVEYOR QUALIFICATION AND TRAINING PROGRAM

During 2010 within the scope of the SVEP-Türk Loydu Surveyor Qualification and Training Program, 32 training programs were organized. The total duration of the training programs was 53 days and attendance at training programs was 567 man x days.

Alongside the trainings held for the surveyors, a number of trainings including, "MLC2006", "Line Surveys", "New Building Surveys", "ISM Code Auditor", "Construction/Classification of Yacht and Wooden Passenger Boats", "Recreational Craft Directive" were given to technical personnel of Republic of Turkey Prime Ministry Undersecretariat for Maritime Affairs and "MARPOL" training for technical personnel of Republic of Turkey Prime Ministry of Transport, Directorate General of Coastal Safety. Within the scope of training activities abroad, in 2010; Türk Loydu Introduction and Classification training was given to Türk Loydu Libya Representation Office and Libya Maritime Administration. The duration of these trainings which were specially organized for institutions were 19 days and a total of 340 manxdays participation was recorded.

Türk Loydu has advanced the SVEP application which was first started in 2009, by developing and putting into action a software on ERP for keeping the training and qualification records of surveyors in electronic database namely the SVEP Module on ERP.

### SHIPS CONSTRUCTED UNDER TÜRK LOYDU CLASSIFICATION

In 2010, 14 various new construction agreements were drawn



up. These are contracts for: 5 Towing Boats, 1 Ferryboat, 2 Train Ferries, 2 Passenger Motors, 1 Split Barge, 1 Waste Collection Ship and 1 Barge. Also during 2010, certification of 8 Passenger Ships, 1 Oil Product Tanker, 1 Waste Collection Ship, 1 Research Ship, 3 Pilot Boats, 1 Service Boat and 3 Barges, all newly constructed, was realized.

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Classification survey activities of the 16 New Type Patrol Boats under construction in the Dearsan Shipyard, which were ordered by the Turkish Republic Undersecretariat for Defense Industries, for the Turkish Naval Forces, are still continuing. Within this scope, the first ship has been completed and delivered. The construction of the 8 LCT type Assault Boats is ongoing, and the port tests for the first boat of this series has begun. Furthermore, sea trials for the Milgem (National Ship) concept corvette HEYBELİADA, of which the plan approval services were carried out by Türk Loydu, are also continuing.

The HAT (Harbor Acceptance Test) activities for the 2nd ship are completed, and starting from November 2011 SAT activities (Sea Acceptance Test) will begin. Outfitting activities at berth for the 3rd ship, the outfitting activities on the slipway for the 4th and 5th ships and the steel hull constructions of the 6th, 7th and the 8th ships are still in progress.

The construction of 8 LCT (Landing Craft Tank) Landing Crafts is still in progress at the Anadolu Shipyard. The HAT activities for the 1st ship have begun. Outfitting activities at berth for the 2nd ship and the outfitting activities slipway for the 3rd ship are continuing. Steel hull constructions of the 4th, 5th, 6th, 7th and 8th ships are continuing at various stages.

Also, the classification contracts for two LST (Landing Ship Tank), that are to be constructed in Anadolu Shipyard, are expected to be finalized at the end of the first half of 2011 and steel construction is expected to be commenced thereafter.

In accordance with the results of the tender of Undersecretariat for Defense Industries, Türk Loydu schedules to have a classification contract drawn up within the first half of 2011 with the İstanbul/İstanbul Shipyard which won the tender for one MOSHIP (Submarine Rescue Vessel), two RATSHIPS (Rescue and Towing

Ships) for which the classification services will and construction activities are due to commence shortly after.

First two boats of 4 Double Ended Ferryboats; 2 of which have 80 car and 600 passenger capacity and the other 2 have 80 car and 400 passenger capacity that are contracted out by GESTAŞ have been constructed in SEFİNE Shipyard and are completed and certificated with names 18 MART and 57. ALAY respectively. The construction of the 3rd and the 4th ships are still continuing. Classification activities for 1 Self Elevating Barge is still continuing in Azerbaijan.

In 2010, within the scope of Yacht and Recreational Craft, 6 yachts and 10 passenger boats were classified, and conformity assessment for 7 recreational crafts was realized.

Among the construction projects in progress; there are 33 yachts, 10 wooden passenger boats and 8 FRP boats, 8 inland water passenger boats and 9 CE conformity evaluation services can be counted.

The contracts of a total of 8 yachts of wood, steel and FTP material, 8 passenger boats of wooden/ FTP material and 6 CE Conformity assessments were drawn up in 2010

### MATERIALS, PRODUCTS, COMPANY CERTIFICATION

In 2010, the majority of the certification activities of the products which are supplied from abroad to be used on the ships that are constructed under the supervision of Türk Loydu were realized within the territory of these countries by Türk Loydu surveyors.

Within this scope ZF gear boxes were certified in Germany, Volvo diesel engines were certified in Sweden, Berg Propulsion



propulsion systems were certified in Singapore, FUNKE Waermestauscher Apparatebau GmbH exchangers were certified in Germany, GEA Bloksma BV exchangers were certified in the Netherlands, KUNGS Hydroliks steering gears were certified in Sweden, FUNDIVISApropellers were certified in Spain, Brevini gear boxes were certified in the Netherlands, Rexnord Antriebstechnik couplings were certified in Germany, Stamford alternators were certified in England, ship plates were certified in the Ukraine, and ship ballistic plates were certified in Ruuki, Sweden. The required inspection and tests have been carried out for the 4000 series machines of main propulsion machine manufacturer MTU GmbH – Friedrichshafen and Type Approval Certificate has been drawn up. Type Approval Contracts have been signed with ABC Diesel N.V., DOOSAN Infracore Co., Ltd., Societe International Des Moteurs BAUDOUIN and certification activities have been started.

As a result of the dialogue we have developed with both national and international material and product suppliers, at the end of 2010, the “Türk Loydu Type Approved Product” product range has been expanded, and finally the number of products that the certification activities were concluded for are 150 in total.

While the demand for the service providers approved by Türk Loydu within the sector is increasing, the number of service providers having “Approved Service Provider Company” certification regarding “thickness measurement”, “fire fighting systems”, “underwater surveys”, “test of radio communication equipment” from Türk Loydu have reached 48 in total.

## RELATIONS WITH FLAG STATES

Türk Loydu participated to the training program that was organized by IMO and the Turkish Undersecretariat for Maritime Affairs in order to introduce the IMO Member States Audit Program (VIMSAS). The training program was organized in İstanbul between the dates 28-30 June 2010. Within the scope of preparations, Türk Loydu was involved in a translation of the international legislation to Turkish language.



The yearly audit of Türk Loydu that has to be carried out in accordance with the Authorization Agreement with the Turkish Undersecretariat for Maritime Affairs was performed between the dates 13-14 May 2010.

Under the target of increasing white flag state authorizations; initiated relations between Türk Loydu and Panama Maritime Authorities have been accelerated and it is expected to be concluded next year.

Similar correspondence started with the Maritime Administration of St. Kitts & Nevis. The communication with the Maritime Administration of Comoros finalized and the Authorization Agreement signed on 22 December 2010.

Various meetings had been realized with the Maritime Administration of the United Arab Emirates and Türk Loydu reached the final stage to get authorization.

Türk Loydu undertakes comprehensive tasks in the defense industry projects. Malaysia takes an important part in such activities of Türk Loydu that were started and conducted outside of Turkey. Within this scope, a commission from Malaysia headed by the Deputy Minister of Defense, H.E. Datuk Dr. Abd Latif bin Ahmad visited Türk Loydu on 03 August 2010. Mr. Murat Bayar, the Undersecretary of the Defense Industry, participated to this visit.



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**TÜRK LOYDU**

### APPLICATION FOR RECOGNITION AS A "CLASSIFICATION SOCIETY"

As defined in the IACS Charter, Annex 4

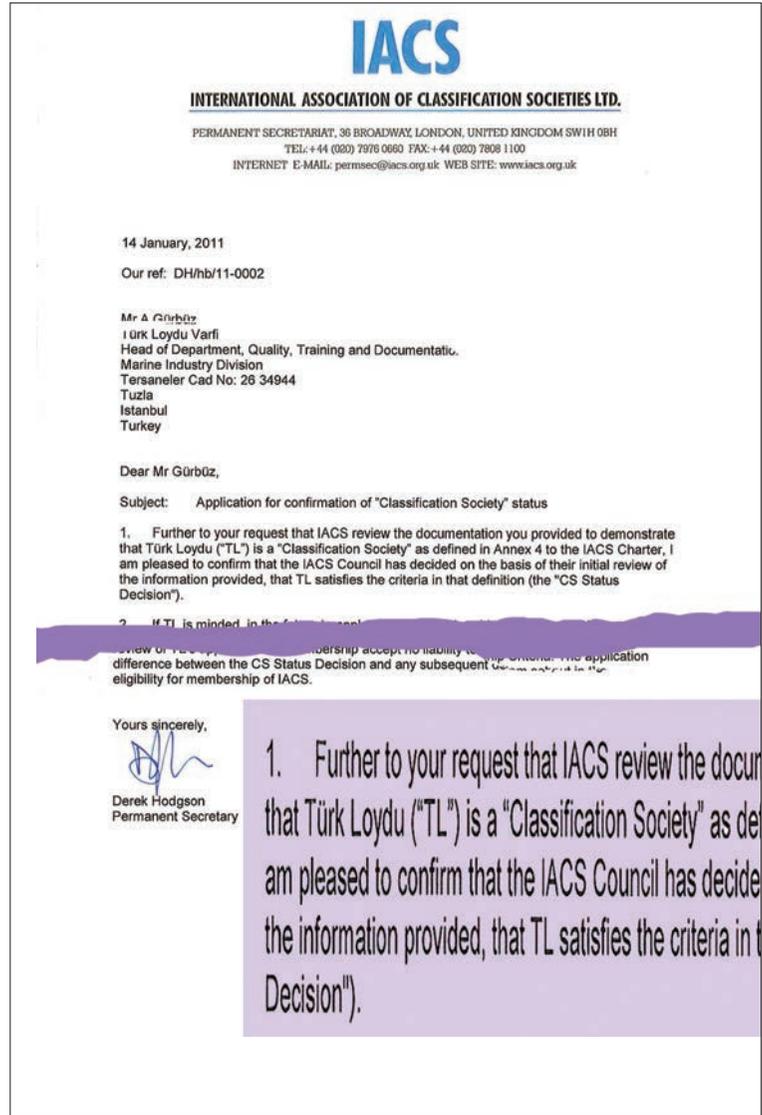


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### RELATIONS WITH OTHER CLASSIFICATION SOCIETIES

The details of the application for membership to IACS discussed



during the visit to the Permanent Secretariat of IACS on 30 September 2010 and by submitting the official application, IACS membership process initiated. Furthermore, the activities for being data provider to European Quality Shipping Information System (EQUASIS) -to which IACS member organizations were providing data- started on 2009 and finalized on 2010. Hence, by the decision of broadcasting council of EQUASIS, Türk Loydu became data provider together with IACS members. On the other hand, Türk Loydu, as a member, participated to the annual meeting of NCSA (Association of Naval Ships Classification Societies) organized at Amsterdam on 18 October 2010. Within the scope of existing bi-lateral cooperation activities, a meeting organized at the Head Office of the Russian Maritime Register of Shipping, St. Petersburg on 25 May 2010.

Various topics related to the IACS quality management system and developing cooperation for training activities were discussed. During the various meetings organized at St. Petersburg and at İstanbul both party expressed its satisfaction for the execution of the bilateral cooperation agreement and agreed to extend the scope of the agreement.

On the other hand, during the year 2010, the urgent survey



requests of the ships classed by Türk Loydu at the North Black Sea ports were met by the exclusive surveyors of the Russian Maritime Register of Shipping within the scope of the bilateral cooperation agreement. Within the scope of bilateral cooperation agreement with ACS-Asian Classification Society, 20 passenger boats are under construction. The plan approval of these boats and the surveys during construction of the 2 boats built at Turkey performed by Türk Loydu. ACS is supervising the remaining boats under construction at Iran.

### ACTIVITIES RELATED TO THE OFFICES, AGENCIES AND REPRESENTATIVES OVERSEAS

The growing of Türk Loydu has been reflected to its international organization. Until 2010, Türk Loydu was represented in Syria by an exclusive representation office. This exclusive representation office become a survey office which employing 4 permanent staff



**IMO**  
INTERNATIONAL  
MARITIME  
ORGANIZATION

**E**

SUB-COMMITTEE ON FLAG STATE  
IMPLEMENTATION  
19th session  
Agenda item 6

FSI 19/6/1  
17 December 2010  
Original: ENGLISH

**HARMONIZATION OF PORT STATE CONTROL ACTIVITIES**

**Equasis information system**

**Note by the Secretariat**

**SUMMARY**

*Executive summary:* This document contains information on the recent developments concerning the Equasis information system

*Strategic direction:* 4, 5.3 and 12.3

*High-level action:* 4.0.2, 5.3.1 and 12.3.1

*Planned output:* 4.0.2.1, 4.0.2.3, 5.3.1.6, and 12.3.1.2

*Action to be taken:* Paragraph 8

*Related document:* FSI 18/7/1

**General**

1 Since the last session of the Sub-Committee, the 17<sup>th</sup> Equasis Editorial Board Meeting (EB 17) and the 22<sup>nd</sup> Equasis Supervisory Committee Meeting (SC 22) were held on 12 October and 29 November 2010 respectively, and the highlights of the recent developments are contained in the following paragraphs.

**Equasis data providers**

2 There has been no change in the criteria to become data providers to Equasis since FSI 18. PSC regimes should meet the following criteria to become data providers to Equasis:

3 At EB 17, Turk Loydu was formally accepted as a new data provider to Equasis which will be effective from November 2010. At present, data providers to Equasis include:

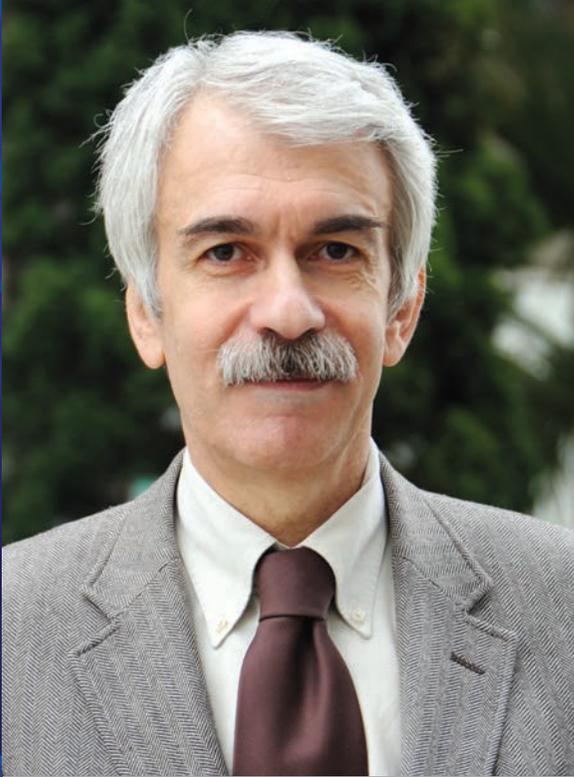
- 1 PSC regimes: Paris, Tokyo and Indian Ocean MoUs<sup>1</sup> and the United States Coast Guard (USCG)
- 2 IMO (for flag State or IACS members and Turk Loydu;
- 3 IACS members and Turk Loydu;
- 4 International Group of P&I Clubs;
- 5 INTERTANKO, INTERCARGO, INTERMANAGER;
- 6 Chemical Distribution Institute (CDI), Q88 and OCIMF;

which consist 1 responsible manager, 2 surveyors and 1 secretary. A training seminar oriented to the Syrian Owners related to the new inspection regime of the Paris MoU that becomes effective on 01 January 2011 organized by our Representation Office at Syria and by the contribution of our Head Office and performed on 9 March 2010. The delegates of the Türk Loydu whom were at Lattakia for the seminar participated to the Graduation Ceremony of the Maritime High School and awarded the students with high performance grade on 10 March 2010.

The Romanian survey station of Türk Loydu activated during 2010 and 1 full time exclusive surveyor started to work at Constanta. According to the growing demands from the region, the activities of Türk Loydu at Middle East are expanding. In this context Türk Loydu is planning to activate its office at Abu Dhabi during the year 2011.

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R. Ercan GÜÇ  
Head of Plan, Control and Research Division

## PLAN CONTROL AND RESEARCH

### SAFE WORKABILITY ANALYSIS OF THE FLOATING DOCKS

**A**s it is well known, according to Shipyard Regulation published by the Undersecretariat (Administration) of Maritime Affairs, in order to obtain the required operational permission from the Administration for the current or soon to be provided floating docks within these facilities, a control report regarding strength, which has to be taken from an authorized classification society, regarding the safe operation of the dock is required. Also, regarding floating docks that will be installed, reports proving that beach anchoring and mooring arrangements can securely deploy the floating dock have to be given by an authorized classification society.

In this context, hydrostatics and stability calculations and the longitudinal strength calculations and the mooring calculations of the floating docks have to be made and sent to the authorized classification societies for verification.

Hydrostatics and the stability calculations are made in order to create a base for the strength calculations and to prove the floating dock's competence in terms of hydrostatics and stability.

Longitudinal strength calculations are made for the loading conditions on the stability calculations.

Local strength calculations are carried out by means of direct (ex. finite elements method) calculation.

In order to investigate the mooring condition of the floating dock, first external loads affecting the dock are calculated, and based on these loads endurance of the binding system is evaluated.

These calculations, analysis and their controls are made si-

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ilarly for steel and concrete docks.

If the calculation and the analysis results are found to be suitable, a report has to be drawn up by the authorized society confirming that the floating dock can operate safely.

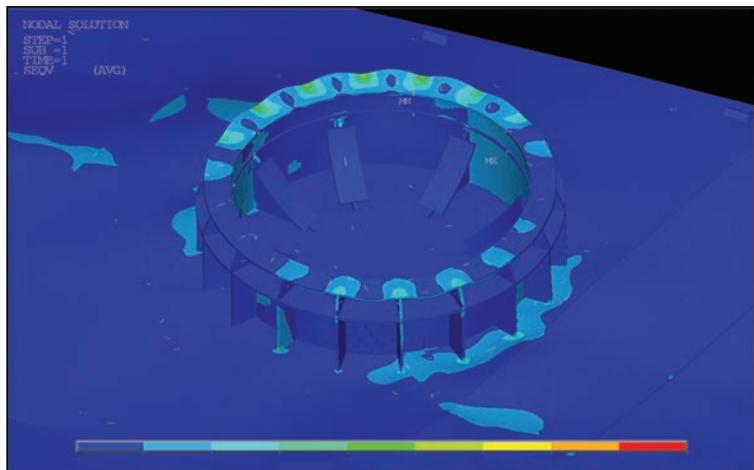
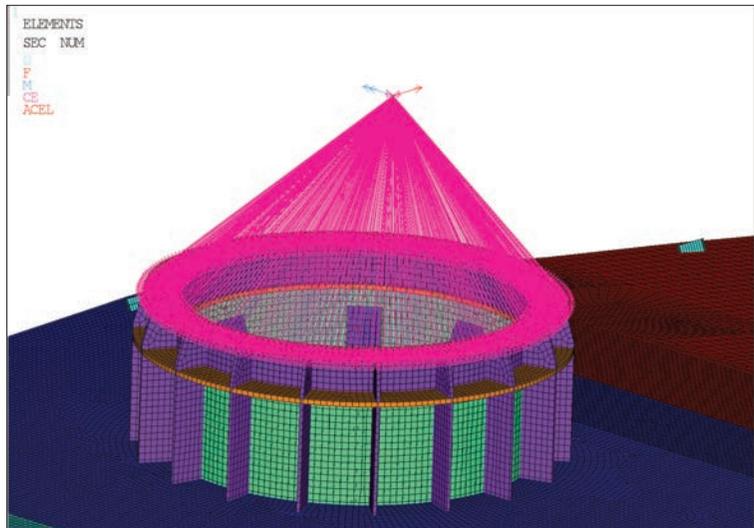
In order to provide an example from 2010 regarding this issue, the Tersan floating concrete dock safe operation analysis and reporting activity can be cited.

## WEAPON SYSTEMS' FOUNDATION ANALYSES

One of the major designing purposes of the battleships is that it has to be capable of fighting the enemy or the threat of the weapons that it carries efficiently and without any problems. Thus, weapons have to available for efficient usage without being affected by operational, maritime or environmental conditions.

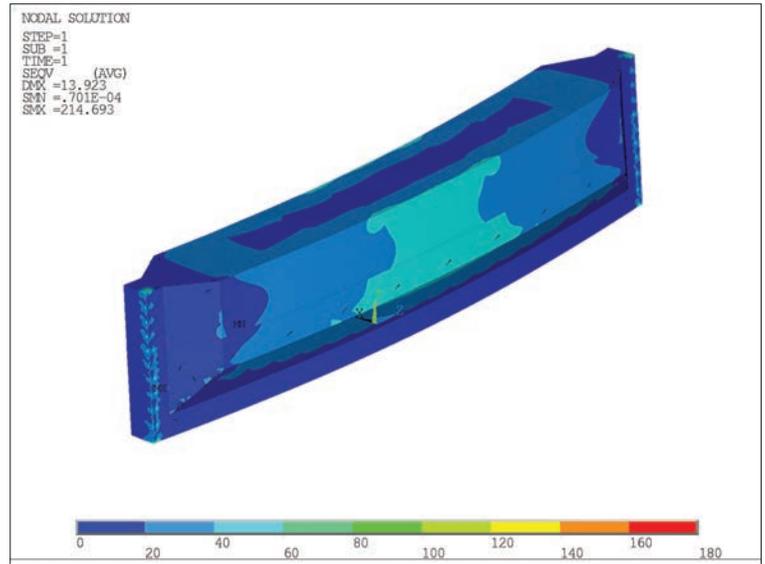
In this sense the connection of the weapon systems to the ship is very important. The foundations of the weapons which connect the weapons' systems with the ship have to provide sufficient conditions in terms of strength and vibration.

Türk Loydu has carried out strength and vibration analyses for weapon systems' foundations by paying special attention to related marine, environmental and operational conditions.



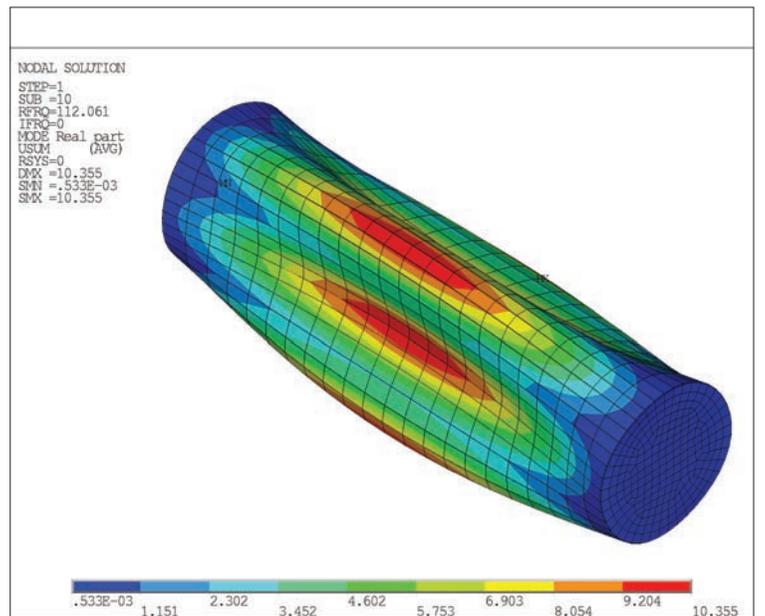
## DOCK CAISSON ANALYSES

Strength analyses under various loading conditions for dock gates where the maintenance activities for the train ferries, which work on Lake Van, were carried out.

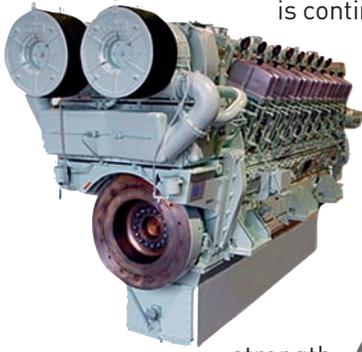


## STUDY REGARDING DYNAMIC STRUCTURAL BEHAVIOR OF A SUBMARINE STRUCTURE

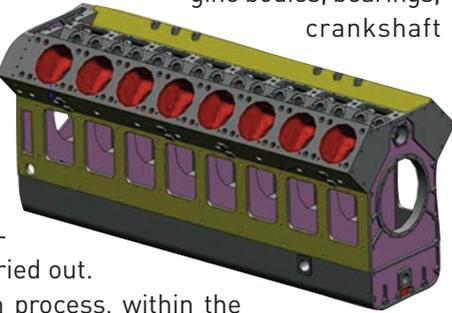
Submarines spend most of the time while they are employed under water, independent from the surface, as they are designed to operate so. Therefore dynamic behavior of the submarines under water is very important. The reaction of a submarine to various vibration and shock sources is very important. A study was conducted by Türk Loydu and the İ.T.Ü. G.İ.D.B. faculty cooperatively, in order to be presented and published in the TEAM 2010 conference, which was organized in Vladivostok, Russia, between 23 – 26 August 2010 in a memorandum called "An Experimental and Theoretical Study of a Submarine Body's Dynamic Reaction Behaviors".



## DIESEL ENGINE CERTIFICATION



Within the scope of the current projects, Türk Loydu is continuing certification activities regarding diesel engines. Within the scope of these activities, certification activities in terms of main propulsion engines and generators for various types of engines belonging to Volvo, ABC, Scania and Doosan are being carried out. During the certification process, engine bodies, bearings, crankshaft



strength calculations and the inspection of fuel, lubrication, cooling water, first movement air and the project controls of the security control systems are being carried out. During the certification process, within the scope of the IACS UR M44 and M53, reevaluation and the update of the current rules are being carried out. Within this scope, stresses occurring on the crankshaft oil holes are taken into consideration.

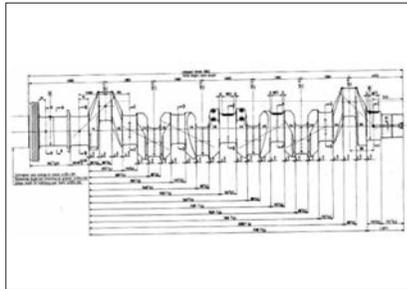
Also during certification processes covering the whole propulsion system and the whole generator package, torsional vibration calculations are taken into consideration within the context of the evaluation in the related projects, and these controls are being carried out in cooperation with Istanbul Technical University.

## FIRE DAMPER CERTIFICATION

In line with the study carried out together with the company called Noske Kaeser Türkiye, FTP Code, ISO 10294 – 1, 2, 3 and IMO Res. A.754(18) are taken as references and NK-TR-FDA-25 model fire damper of the company is certified in order to be used on the A class bulkheads.



Within the context of this certification process, conformity of the damper materials, isolation requirement, connection type of the damper, the open/close indicators activation and the spring elements are evaluated and approved in line with the standards. Required tests and the test conditions in order to



conclude the certification activities are identified, and the related information has been given regarding realization of the tests.

## FENDER CERTIFICATION

Within the scope of the TS 1967, TS 1969, TS2680, TS 2827, TS 4595, TS 4698, TS 9568, TS 9743, TS 11007, ISO 34-1, ISO 37, ISO188, ISO 815, ISO 1431-1, ISO 1817, ISO 2781, ISO 4649, ISO 4662, ISO 7619, ASTM D 429 (B), ASTM D 430-95 (B), ASTM D 575-91, ASTM D 2240 standards project, inspections of the B type fenders belonging to Ermaksan with varying dimensions of 100x45x1500 ~300x150x1500 are being carried out and the tests



and the test conditions that these collision mats have to be subjected to within the context of these standards are identified, and information regarding the realization of these test are given.

## HEAT EXCHANGER CERTIFICATION

Within the context of the studies carried out in 2010, during type approval and product certification activities of Box Cooler type, tube type and plate type heat exchangers of companies like BLOKSMA, HC Cooler, FUNKE are controlled and approved within the scope of Türk Loydu Rules, ASME (American Society of Mechanical Engineers) Standards, TEMA (The Tubular Exchanger Manufacturers Association) Standards and AD-Merkblaetter AD2000 standards.

## 500 KW WIND TURBINE PLAN APPROVAL

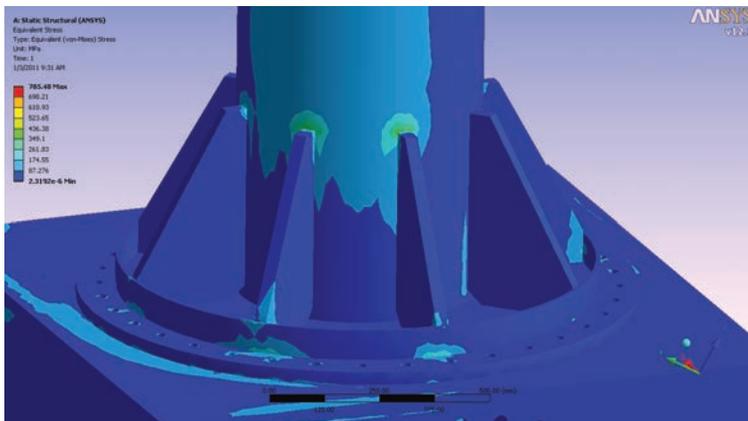
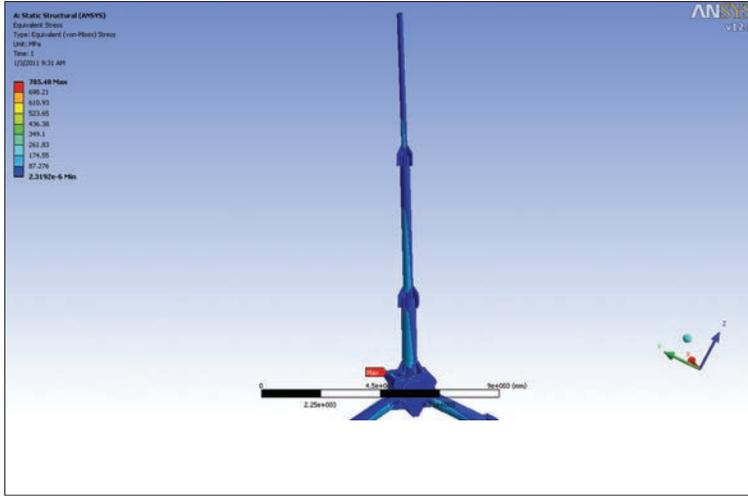
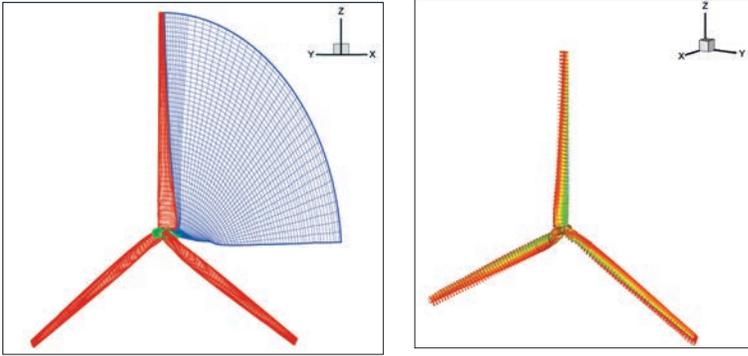
In 2010, within the scope of the 500 kW wind turbine type approval in cooperation with the Turkish wind turbine manufacturer

	<b>Plate Fin Oil Cooler P-type</b> » to the products
	<b>Box Cooler K-type</b> » to the products
	<b>Shell &amp; Tube Heat Exchanger N-type</b> » to the products
	<b>Charge Air Cooler C-type &amp; Lube Oil Cooler P-OEM-type</b> » to the products
	<b>Safety Cooler PDT-type</b> » to the products

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Soyut Yapı ve Mühendislik A.Ş., the following plan approval activities were carried out.

- Control of wind turbine theoretical power curve and control-operation system.
- Determination of aerodynamic characteristics of rotor blades and forces exerted on blade structure.
- Evaluation of the main shaft bearing.
- Evaluation of the static analysis of the rotor blades, flange and support elements depending on the various wind conditions.



## TÜRK LOYDU RULES

Türk Loydu rules are being updated and new rules are being published by considering issues such as developing technology, changing national and international rules, improved standards, efficiency, environmental safety, occupational health and safety.

As a result of the studies of the rule commissions consisting of Türk Loydu and İTÜ staff, unique Türk Loydu Classification and Survey rules, Hull rules and Machinery rules were completed at the end of 2010 and sent to the related companies in order to assess their opinions regarding this issue.

Within this scope, developing of the unique Türk Loydu Electrical Installation and Material rules are still continuing.

### In 2010;

- Volume C, Chapter 29 - Guidelines for the Carriage of Refrigerated Containers on Board Ships,
- Volume D, Chapter 33 - Guidelines for the Construction of Polar Class Ships
- Volume F, Chapter 202 - Guideline for the Certification of Condition Monitoring Systems for Wind Turbines
- and also Volume D, Chapter 70 - Multi-Mooring Systems were published in English.





### RULES FOR AVIATION FACILITIES OF AIR CAPABLE SHIPS

As it has been notified by the Naval Forces Command that a Landing Platform Dock is required, at the beginning of 2010, the announcement regarding Landing Platform Dock (LPD) was made by the Under Secretariat for Defense Industries.

Landing Platform Dock (LPD), belonging to the amphibious naval ship family, in cases of mission, war and even natural disasters provides loading/unloading and transfer activities and also has the ability to be used as a host for military aircrafts to land or stay.

Following to this announcement, shipyards interested with this issue started to work on this ship and they sped up their pre-design activities. The drafts regarding the ship began to be established based on the source documents and also requirements announced on the technical specification. Due to the fact that ship has various characteristics and that this fact leads to a highly complex structure, important problems emerged during the design step. With its experience in the field of naval ship classification, and also with its rules developed

specifically for Naval Ships, Türk Loydu has been evaluated as an important source regarding this subject. Türk Loydu has been faced with many important questions asked by these shipyards regarding the design of this special ship.

Due to the fact that deploying a helicopter deck on the ship has a major affect on the main dimensions of the ship, this issue has become one of the most discussed questions by related parties, including Türk Loydu. Safe distance (clearances) of the specified helicopters between themselves and also between the superstructure, and the fact that issues such as deck strength in these areas are not specified clearly in any source, has proved that a rule development has to be organized focusing specifically this issue.

For this reason, at the end of 2010, the Türk Loydu Plan Control and Research Division, Research and Rule Development Department, within the scope of the Rules regarding Naval Ships, Chapter 102-Naval Ship technology, Hull Structures and Ship Equipment, established a new chapter called "Rules for Aviation Facilities of Air Capable Ships" and it is scheduled to be completed at the end of March, 2011.



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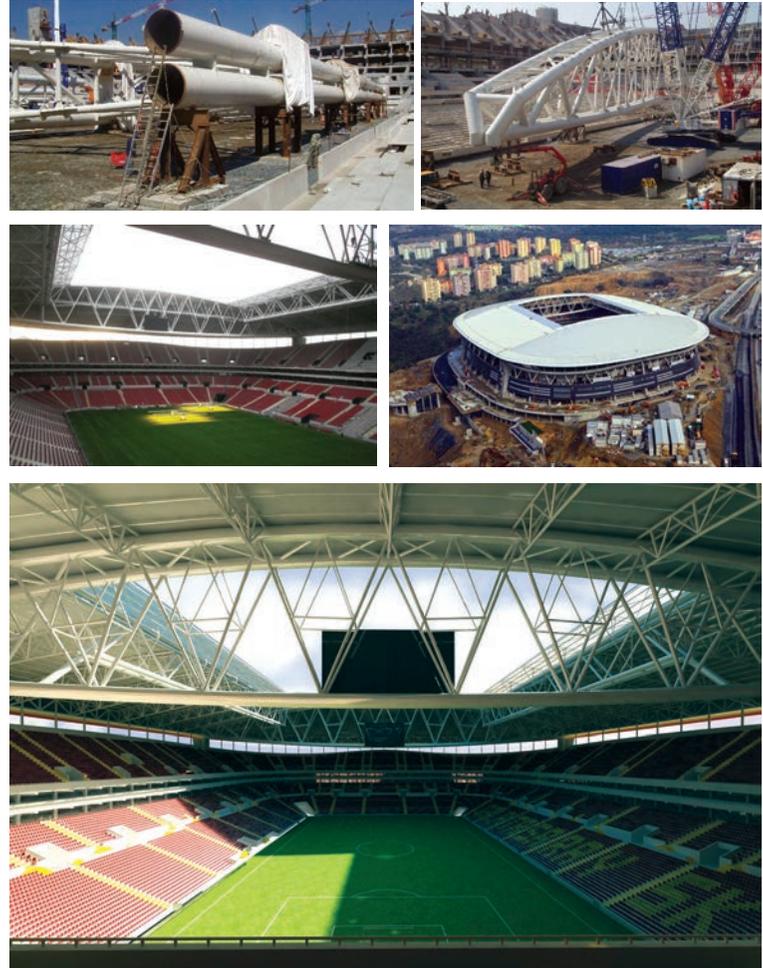
Ayfer ADIGÜZEL  
Head of Industry and Certification Division

# INDUSTRIAL INSPECTION

## STEEL CONSTRUCTION PRODUCTION CONTROLS

### **G** ALATASARAY SEYRANTEPE STADIUM (TÜRK TELEKOM ARENA)

Steel construction production of the stadium which has 55,000 audience capacity and a 7,500 ton tonnage began in November, 2010, and the production and assembly control services in the construction site were completed. Within the scope of the project, following welding methods of the Steel Construction Technical Specification and the method confirmations, welders were certified according to EN1090-2 standard. Production and assembly controls in the construction site were carried out according to technical specifications specified by the client and Inspection and Testing Plan (ITP). Steel construction production controls of the stadium were completed in 2010 and it was put into service after an opening ceremony. By completing its duty within the scope of the project, Türk Loydu left the field at the end of 2010.



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### PROJECT ZORLU CENTER

Preparation of the Steel Construction Technical Specification of the Project Zorlu Center which is being built in the field previously owned by Highways Commission in Zincirlikuyu based on the EN 1090-2 standard is supported by TÜRK LOYDU through its experience in the field.

After the client confirmed the Technical Specification, Inspection and the Test Plans of the project were established. Steel construction production weighing 13,000 ton was subcontracted to three different manufacturers.

During the meetings organized with the steel manufacturers before the production started, the Inspection and Test plan was clearly explained, and within the scope of the project, particular issues, such as “who will carry out which control activity”, “according to which document and when”, “according to which standard and where will he/she record the control result” were communicated in detail.

Four TÜRK LOYDU inspectors oversaw the project full time including the construction yard.

Steel construction production of the project is scheduled to be completed in July 2011.

### HALIÇ METRO PASSAGE BRIDGE

This bridge will be built near Unkapanı Bridge and it will be made completely of steel. It will be 13,000 ton in total. Production



of the bridge began in March, 2010, and is still continuing. The main production code of the bridge is AWS D1.5 Bridge Welding Code.

Alongside the steel production, acceptance tests of some of the systems of the bridge that have been built abroad are also



carried out under TÜRK LOYDU's expert supervision and our confirmation.

### FENERBAHÇE ÜLKER ARENA PROJECT

The project is being built in Ataşehir, İstanbul, weighing 1,600 ton. The Steel Construction Technical Specification and the Inspection and Test Plan of the project are prepared based on the EN 1090-2 standard and with the support of TÜRK LOYDU's expert support. The production and the control of the steel part of the construction is still continuing.



### DIAMOND OF İSTANBUL TOWER

Building for the project began in 2006, in Maslak, İstanbul. The total tonnage of the Diamond of İstanbul Tower is 15,000 ton. Within the scope of production and assembly control of the steel construction which surrounds the concrete core, third party inspection services were carried out in 2010, according to AWS D1.1 Structural Welding Code.



## STEEL CONSTRUCTION PRODUCTION CONTROLS

### ■ MARMARA FORUM SHOPPING MALL

The project is built in İstanbul's Merter district and its total tonnage is 8,000 ton. The pre-production Steel Construction Technical Specification and Inspection and Test Plan were carried out by TÜRK LOYDU's expert support based on the EN 1090-2 standard. The production and the control of the steel part of the construction was completed in 2010.



### ■ NATIONAL ARCHIVE PROJECT

The purpose of the construction project is collecting the Ottoman Archives which are now stored in four different parts of İstanbul. The construction is situated in the Kağıthane district, at the back of the Cendere Valley, and it has a surface of 9 hectares. The National Archive Building includes congress centers, social facilities, and conference and exhibition halls as well.

Factory production controls carried out based on the EN 1090-2 standard of the 1500 ton of steel construction that will be used in the Foyer Zone of the archive building, in the seated roof, and in the conference hall were completed at the end of 2010, and the production controls at the construction yard are still continuing.



## REFINERY - PETRO CHEMISTRY AND POWER PLANTS' CONTROLS

### ■ CAPACITY INCREASING PROJECT OF COMBINED CYCLE NATURAL GAS POWER PLANT OF ALSİM ALARKO KIRKLARELİ

The control activities of the project were started on October 2009 and it was completed at the beginning of 2011. The project's scope covers WPS, PQR confirmation according to ASME Sec.IX, Welder Certification, confirmation of Thermal Processing procedures, visual control of the Welded parts on the Piping Lines, confirmation of the evaluation results of the NDT films, providing supervision of the Ultrasonic and Magnetic Particle Tests, evaluation of the control results and providing supervision of pressure tests and confirmation services.



## PIPELINE ACTIVITIES

### ■ PIPELINE VALVE CHANGING ACTIVITIES

On different construction yards, thirteen ball valves are assembled in two of the crude oil pipelines (lines of 40" and 46" in diameter) coming to Botaş Ceyhan Terminal from Iraq. Abiding by the project, all the by-pass production and assembly activities, pipe line cutting, assembly of the valves and all NDT tests carried out after assembly have been realized under the supervision of TÜRK LOYDU.



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Following the completion of all the technical details the project concluded within 12 months.

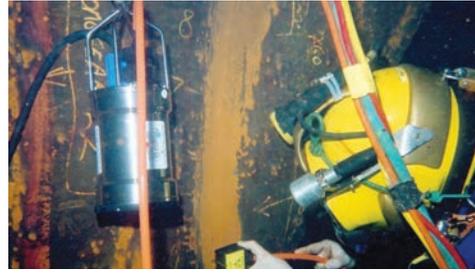
Starting from a construction yard situated in Siirt – Silopi on the zero point of the Iraq border line, the project covers the construction yards of Siirt – Cizre, Siirt – İdil, Bozova – Urfa, Narlı – Kahramanmaraş, Nurdağı – Kahramanmaraş, Osmaniye and Ceyhan – Adana.

construction yards of Siirt – Cizre, Siirt – İdil, Bozova – Urfa, Narlı – Kahramanmaraş, Nurdağı – Kahramanmaraş, Osmaniye and Ceyhan – Adana.

### PERIODIC CONTROLS OF THE OFF-SHORE PLATFORMS

In 2009 a five-year contract was signed between Türk Loydu and the Turkish Petroleum Corporation (TPAO) for the periodic controls of the off-shore platforms for five years. As required by this comprehensive contract Türk Loydu has established a control list for the Ayazlı platform which is situated in a territory of -80m deep in the Akçakoca natural gas zone. According to this control list, underwater controls (thickness measurement, anode potential measurement and the visual control of the steel construction welding) are being carried out.

On the North Marmara Natural Gas Platform, the inspection of the general status of the steel construction which is situated in the deck part, pressurized equipment on the well and well head systems, electricity system, solar panel, life support units according to the TÜRK LOYDU control list are completed. In 2011, on the North Marmara Platform, anode changes will be carried out. As the anode change process requires welding under water, in 2010 TÜRK LOYDU received Underwater Welder Certification accreditation (EN 15618-1 and AWS D3.6) and thus aimed to avoid the problems that might occur due to the lack of underwater



welding which can be faced during and before anode change activities.

### ■ STEEL STRUCTURE WEEK – 2010 INTERNATIONAL SYMPOSIUM

In order to share the experience that it has regarding steel production and assembly Türk Loydu has participated in an International symposium named Steel Structure Week – 2010 which was organized in İstanbul – The Marmara hotel on 20 – 24 September 2010. In the symposium, the majority of the participators were project designers, manufacturers and inspection societies serving in this field. A study named after the “THIRD PARTY FABRICATION INSPECTION OF STEEL STRUCTURES” was pre-

sented on behalf of Türk Loydu. With this presentation, participants were informed by TÜRK LOYDU regarding production and assembly inspections. Also projects which are completed or in the completion process for inspection by TÜRK LOYDU were notified to the other parties.

On the TÜRK LOYDU stand, which was present in the symposium, necessary information was given to the participators who wanted to receive more detailed information regarding Steel Construction Inspection.

### ACTIVITIES REGARDING ELECTRICITY



### AND THE CERTIFICATION OF THE TURBINES

In 2010, accreditation from TÜRKAK was received regarding the following fields:

- Confirmation of the Grounding Measurements, Periodical Inspections,
- Product Inspection and the Confirmation of the Wall Boxes,
- Product Inspection and the Confirmation of the A.G. and Y.G. Transformers,
- Type / Product Inspection and the Confirmation of the Electric Cables,
- Periodical inspection of the Fire Sensing and Warning Systems.

Türk Loydu participated in the “16th International Energy and Environment Fair and Conference” which was organized on 12-14 May 2010 at WOW Convention Center/Istanbul and presented its study “WIND TURBINES IN TURKEY”. Türk Loydu also participated in the “9TH World Wind Power Conference and Exhibition” which was organized on 15-17 June 2010 at Haliç Congress Center/Istanbul and presented its study “AN APPROACH TO WIND TURBINE CERTIFICATION SYSTEM FOR WIND ENERGY MARKET OF TURKEY”. Within the scope of the event “INTERNATIONAL TURKISH ENERGY SUMMIT” which was organized on 02 – 04 September, in the conference named after “TODAY AND THE FUTURE OF THE WIND POWER TECHNOLOGIES” study named after “WIND TURBINE CERTIFICATION” was presented.



# INDUSTRIAL CERTIFICATION

## UNDERWATER WELDER CERTIFICATION ACCREDITATION

Within the scope of EN ISO 15618-1 Classification Experiment regarding Welders who perform Wet Welding Underwater – Chapter 1: Diver Welders who perform Wet Welding under High Pressure and according to AWS D3.6, 17024 Conformity Evaluation – General Conditions for the Societies making Personnel Certification standards, Türk Loydu is the first society to have received accreditation from TÜRKAK.

Underwater welding is applied to drilling installation and platforms (off-shore platforms) of oil and gas fields, reinforcement of underwater structures, the production and repair of the connection points of underwater pipelines, port construction and repair, construction of bridge piers, construction of channel pools, the repair of ships and submarines, and scientific and naval trials. Due to the fact that repair activity is cheap and that the equipment is portable makes its importance even higher in terms of underwater technology. For example, if the ships are pulled to shipyards for reasons other than the requirement of annual repairs for maintenance repair jobs this leads to high costs and creates big losses for shipping companies. On the other hand, the temporary repair of these structures by means of underwater welding is very economical.

Welding activities taking place underwater are divided into two types - dry welding and wet welding.

■ **Dry Welding:** the welder and the part to be welded are in a room completely isolated from water and where ambient pressure is present. The welder doesn't use his/her diving equipment and the room is specifically prepared for welding.

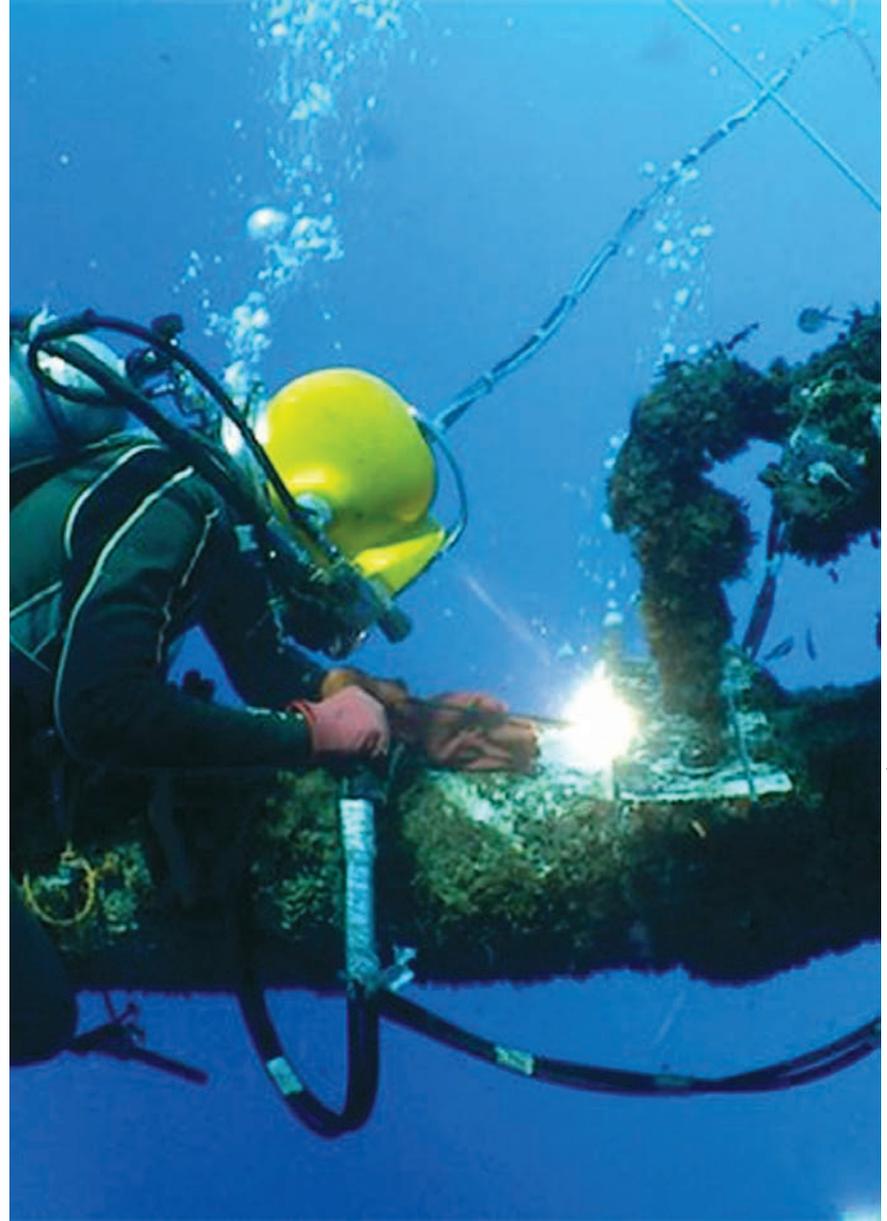
■ **Wet Welding:** the diver welder and the part to be welded are completely in the water. The diver uses equipment specifically designed and developed to be used underwater, such as pincers, blowpipes, electrode holders, and electrodes with water resistant covers. With this method, high quality welding is provided by covering the welding place with gases that occur during welding and by avoiding the absorption of water with these covering gases.

## AWS D 1.1 AND AWS D1.5 WELDER CERTIFICATION ACCREDITATION

Türk Loydu received accreditation from TÜRKAK, according to ISO 17024 Conformity Evaluation – General requirements for bodies operating certification of persons standard AWS D 1.1, regarding Steel Structure Welder Certification and according to AWS D 1.5, regarding Bridge Welder Certification.

## AWS D 1.1 STEEL STRUCTURE WELDER CERTIFICATION

The welders who will work on steel structures (Plazas, hotels, sky scrapers, shopping malls, hangars, and stadiums etc.), under



the supervision of Türk Loydu Surveyors can take the exams conforming to ISO / IEC 17024 Personnel Certification standard. After the evaluation of the test parts as deformed and/or not deformed the certification can be awarded.

During AWS D 1.1 steel construction, basic knowledge is provided for parties covering their responsibilities. Subjects such as the design of the welding connection points, welding method confirmation, assembly, control, reinforcement of the structure and repair are covered. The plate and the tube connection of the full and partial penetration welds are explained in detail. Detailed information is provided regarding material – wire and/or electrode combination, the selection of the deformed and/or not deformed tests, and the class of the inspection method.

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### AWS D 1.5 CERTIFICATION OF THE BRIDGE WELDERS

Under the supervision of a Türk Loydu Surveyor, the welders who will work on production projects including welding on steel bridges (such as the Bosphorus Bridge, FSM Bridge, Haliç Metro Bridge) can take the appropriate welder exam conforming to ISO / IEC 17024 Personnel Certification Standard.

The test parts are evaluated as deformed and/or not deformed. After these processes, certification is provided depending on the results obtained. AWS D1.5 covers the requirements of the welded construction of the bridge constructions; it informs on main metal, certificates that the producer has to have, identifications, measurement standards, design of the welding connection points, welding method confirmation and mechanical tests. Also detailed information regarding a selection of the deformed and/or not deformed tests, and classification of the inspection method are provided.



### PROJECT CONFIRMATION ACCREDITATION OF THE LIFTING AND CONDUCTING EQUIPMENTS

In 2010, within the scope of the ISO 17020 General Criteria for the Operation of Various Types of

Bodies Performing Inspection, Türk Loydu received accreditation from TÜRKAK for project confirmation of the lifting and the conducting equipments.

Previously, within the scope of the ISO 17020 accreditation, Türk Loydu carried out production control activities, certification services and periodical control services regarding lifting and conducting equipments.

With this service being taken under the scope of the accreditation, Türk Loydu now carries out project control and confirmation services of these products conforming to FEM, ISO, DIN-EN design rules as a society which has been accredited by TÜRKAK – Turkish Accreditation Society.

Portal cranes, overhead cranes, rotating dock and ship yard boom hoists, container cranes (moving on the rail and rubber tyred), ship loading/unloading systems, mobile cranes, tower cranes, floating cranes, deck winches, boatlifts, manlifts, chain hoists, balancers, etc. are some of the lifting and conducting

equipments.

The following inspections are carried out during the stages of production, assembly and commissioning of the equipments whose projects are confirmed by Türk Loydu:



- Material inspections,
- Production inspections,
- Inspection of the welders and their certification

### PARTICIPATION IN THE TANK STORAGE FAIR

Türk Loydu participated in the international "Tank Storage" conference and fair which was organized by Port Finance International in İstanbul on 3-4 November 2010. During conference, Türk Loydu presented its study named "Certification of the Storage Tanks".

Alongside the COADE program, which is used by Türk Loydu during the storage tank project and calculation inspections, information regarding API 650, API 653 standards is also provided.

Tank storage, tank roof, floor structure, wind load, seismic analysis are some of the issues dealt with during project and calculation inspections.

In the presentation, practical information which might be useful during production, points that need to be observed during operation and design criteria which conforms to standards regarding storage tank fire fighting systems are some of the issues that were dealt with.

Welding methods and their confirmation, welder certification, branding, orientation of the steel plates, points that should be observed during the welding of a tank body, roof and nozzles, the cathodic protection method, NDT methods, hydrostatic pressure testing of the



storage tanks, and the difference in the NFPA, API and IP standards of fire fighting systems are some of the issues dealt with during production inspections.

### INSPECTION OF THE FIREFIGHTING SYSTEMS

The inspection of the fire fighting systems by third parties especially on the locations where there is a high risk of fire, plays an important role in avoiding the flaws resulting from operational blindness, design and wrong interpretations. For this purpose Türk Loydu provides services for industrial facilities, commercial buildings and residences in fields such as project inspections of fire fighting systems, assembly inspection and the conformity of the systems to the related company.

Alongside these services Türk Loydu can provide conformity certification by supervising hydraulic performance tests for the determination of the capacity-pressure values of the fire pumps which are the heart of the fire extinguishing systems in regards to whether they meet with the requirements of the "Regulations Regarding Fire Proofing the Buildings" or not.

Türk Loydu evaluates the facilities within the scope of the "Regulation on Procedure and Principles regarding Providing Operating Permission for Shore Facilities". During this evaluation primarily the conformity and the functionality of the fire extinguishing systems at ports are considered according to standards regarding Regulations about Protecting the Buildings from Fire.

In 2010 Türk Loydu provided conformity evaluation services for fire extinguishing systems' project confirmation to ERDEMİR PORT, and AYGAZ FILLING FACILITY.

Also in 2010 Türk Loydu provided conformity evaluation



services for equipment inspection of the fire extinguishing systems for the ERDEMİR PORT, MARTAŞ PORT, Ankara, İstanbul and Izmir branches of the HILTON Hotels, İstanbul CONRAD Hotel, and MERCEDES BENZ TÜRK A.Ş.

### CE CONFORMITY EVALUATION ACTIVITIES

Steam boilers, steam generators, hot oil boilers, hot water boilers, boiling water boilers, LPG tanks, LNG tanks, LPG transportation tanks, compressor tanks, steam sterilizers, LPG tubes, LPG autogas tanks, hyperbarical pressure rooms, valves, heat exchangers, autoclaves etc. can be given as examples of the products that are evaluated in terms of CE conformity with the approved society identification number 1785 by Türk Loydu.

**CE** 1785

In 2010 Türk Loydu carried out 485 CE certification services for various pressurized equipment of various capacity and type.

### PRODUCT CERTIFICATION ACTIVITIES

Examples of products whose production inspection and certification carried out by Türk Loydu are given below:



**BOILERS:** (Steam boilers, hot water boilers, hot oil boilers etc.)

**PRESSURE VESSELS:** (LPG tanks, LNG tanks)

**STORAGE TANKS:** (Fuel oil tanks)

**LIFTING EQUIPMENTS:** (Portal crane, hoist etc.)

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Türk Loydu has carried out production inspection and certification services for 110 boilers which are between 10 – 500 square meters and 653 pressure vessels which are between 1 – 300 cubic meters in 2010.

### CERTIFICATION OF THE WELDERS

Starting from 23 June 2009, Türk Loydu prepares welder certifications as an accreditation society operating in the scope of ISO 17024 Conformity Evaluation – General requirements for bodies



operating certification of persons standard.

**The scope of the accreditation is given below:**

- TS EN 287-1:2007 Certification of the Steel Welders
- TS EN 1418:2003 Certification of the Welder Operators and Resistance Welder Adjusters for the Fully Mechanized and Automatic Fusion Welding of the Metallic Materials
- API 1104:2005 Certification of the Pipeline Welders
- TS EN 13067:2005 Personnel Certification for the Plastic Welders
- AWS D 1.1 Steel Structure Welder certification
- AWS D.1.5. Bridge Welder certification
- AWS D3.6 Underwater Welder certification
- EN15618-1 Underwater Welder certification

Also following the training given within the scope of the Türk Loydu – GİSAŞ cooperation project for individual welders, welder examinations are organized and certification services are provided. Within the scope of this project alone 182 welders were educated and certified in 2010.



In addition to this, as a result of the agreement made with GİSAŞ, individual certification services for the welders began in the second half of 2010.

In 2010 Türk Loydu carried out 2004 welder certification services.

# SYSTEM CERTIFICATION



## EN16001 ENERGY MANAGEMENT SYSTEM CERTIFICATION

**A**dopting social responsibility and environmental consciousness as a principle, by transferring this principle to its clients in order to make a contribution to establish a sustainable energy management system and facilitate the conformity of the organizations to legal regulations, Türk Loydu has started certification activities for the EN 16001:2009 Energy Management System Standard.

Energy Management is a disciplined study which is structured and organized in line with efficient utilization of the energy without sacrificing security or environmental conditions and without decreasing production. By means of recycling the energy waste, increasing the energy efficiency and avoiding the current energy loss, energy management adopts the principle of decreasing

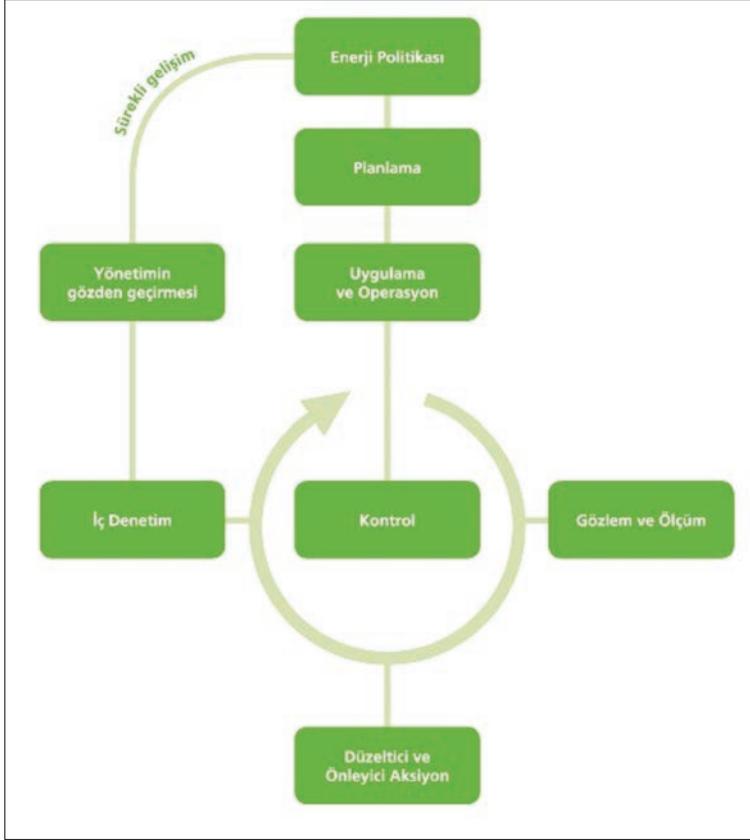
the consumed energy value to a minimum without decreasing the quality and performance or sacrificing economical development and social prosperity.

In today's conditions where the total energy costs are over 50 % of the total production costs, if one considers the enforcement of the Energy Efficiency Laws requiring the efficient utilization of energy, avoiding wastage, lightening the burden of the energy costs over economy, and in order to protect the environment increasing efficient usage of energy sources and the energy savings over energy utilization and establishing an energy management system are inevitable.

Regardless of the energy type in question, the EN 16001:2009

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Energy Management System standard sets up rules for continuous improvement regarding more effective and more sustainable energy consumption.



Application steps of the system are the determination of energy efficiency needs, establishing the politics and targets, identification of the processes, determination of energy manager and other sources, designation of the measurement and monitoring plans, preparation of the procedures, building communication and carrying out the applications, carrying out internal inspection, reviewing activities and continuous improvement.

### ISO 10002 CUSTOMER SATISFACTION MANAGEMENT SYSTEM CERTIFICATION

A customer talking about his/her experience regarding his/her satisfaction or dissatisfaction to the people close to him/her is one of the most efficient methods during the purchasing process.

If it can be managed well by the companies, this situation also represents the best marketing method. Due to the fact that the customer gets the information from one of his/her close acquaintances, persuasiveness and the directing power of the advertisement becomes very powerful.

The standard named "ISO 10002:2004 Quality Management – Customer Satisfaction – Guidelines for Complaints Handling in Organizations" has been published by ISO for companies who want to make a difference in the eyes of their customers, who value the thoughts and opinions of their customers, and as far as it is applicable, for companies who use these opinions for continuous development.

According to the ISO 10002 standard, a customer complaint has to be evaluated as an opportunity for development and it should be noted that these complaints are a very important means for customer loyalty and increasing the number of loyal customers. Also, being certified in this field, is a very good advantage in terms of perception and marketing.

Knowing that companies establishing and applying complaint management systems applicable to their structure can increase their competitiveness and can become one of the big players operating in international markets, Türk Loydu continued its ISO 10002 Customer Satisfaction Management System certification activities started in 2010 which has been in 2009



### ISO 14064 GREENHOUSE GAS EMISSION VALIDATION AND VERIFICATION ACTIVITIES

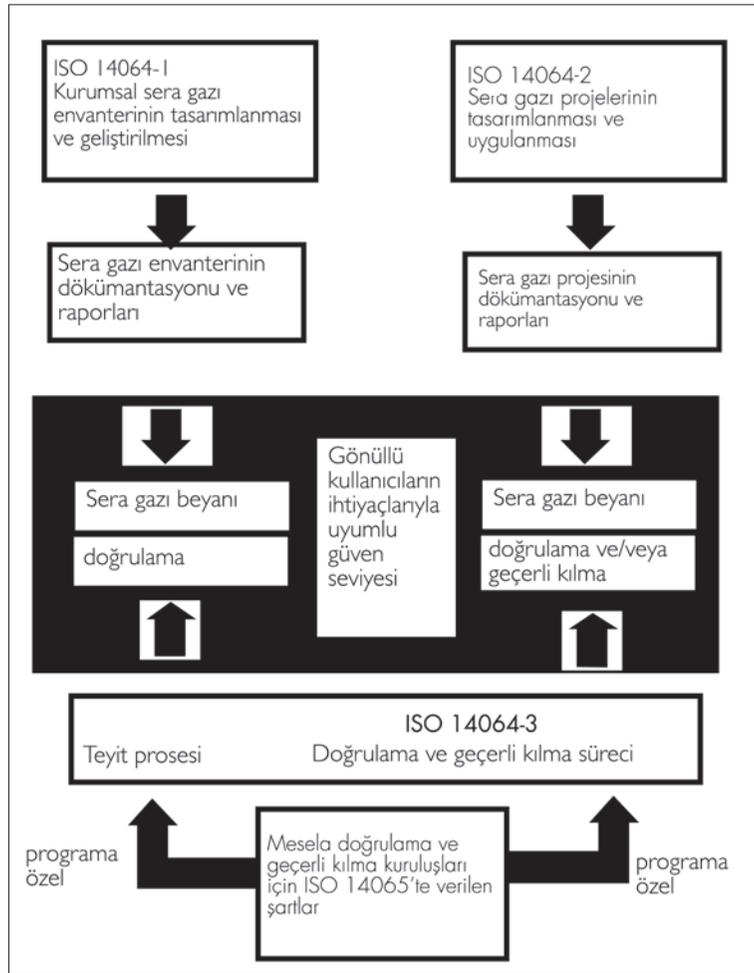
ISO 14064 represents a series of standards advised to be used as a guide for a company during reporting and suspending activities of greenhouse gas emissions, taking inventory, decreasing or suspending greenhouse gas emissions, enhancement projects,



and the verification and validation of the greenhouse gas declarations. It is a reconciliation protocol. It was published by the International Organization for Standardization (ISO) in 2006 and it aims to decrease greenhouse gas voluntarily.

Companies are creating greenhouse gas emission inventories in order to be competitive, lead and be prepared for future legislations along with environmental and social responsibility.

With its expert and experienced staff Türk Loydu carries out verification and validation services about greenhouse gas emissions.



## ISO 22000 FOOD SAFETY MANAGEMENT SYSTEM CERTIFICATION

The Türk Loydu System Certification Department has been carrying out its food safety management system certification activities conforming to HACCP specification since 2000. And Türk Loydu is continuing its activities in 2008 as well by being accredited according to the ISO 17021 standard received from TÜRKAK (Turkish Accreditation Agency) under the scope of ISO 22000 Food Safety Management System certification.

## MANAGEMENT SYSTEM CERTIFICATION IN THE TELECOMMUNICATION SECTOR

Technologic developments and the increasing globalization trend put the telecommunication sector into a transition process, forcing it to leave conventional methods in the past. Rapid technological development, the expansion of the product range, and increasing competition made the change necessary in terms of politics requiring radical corporate conversion. Within this scope, management system certification activities guide corporations in targeting continuous development in accordance with national and international requirements.

Successful completion of this conversion process requires improvement in information and service quality, finding creative solutions, qualified manpower, and respect for human beings and the environment. Thanks to integrated management systems, companies can provide their services for customers continuously, enhance their communication with their suppliers and customers,



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reduce their costs, empower their management, monitor supplier performance effectively, increase staff motivation, establish effective time and source management, provide health and the security for the staff on behalf of the corporation, and the people around, minimize the effect on the environment and thus carry out their social responsibility.



Türk Loydu taking into account the needs of the telecommunication sector in 2010 provided certification services including ISO 9001, ISO 14001 and OHSAS 18001 standards for important corporations operating in the sector.

### MANAGEMENT SYSTEMS' CERTIFICATION IN SHIPYARDS

Within the scope of the "Regulation on Methods and Rules Concerned with Operation Permission for Shipyards, Shipbuilding and Boatyards" published on 10 August 2008 and revised on 13 November 2009 and 11 December 2010, it is mandatory to be certified the TS EN ISO 9001 quality, TS EN ISO 14001 environment,

and OHSAS 18001 occupational health and safety standard starting from the date they receive their operating permission within a maximum three years.

With its experience in the shipbuilding field and with its accreditation and expert staff, Türk Loydu provides certification services to shipyards and ship subsidiary industry corporations within the scope of the ISO 9001, ISO 14001 and OHSAS 18001 management systems.

### ISO 30000 SHIP RECYCLING MANAGEMENT SYSTEM CERTIFICATION

With ship recycling, the cruise of the ships which completed their economical life are canceled and in order to reuse them, an economical recycling of the ships is targeted. The Ship Dismantling Industry in our country was established in the Izmir/Aliağa district in order to provide raw material for the construction of iron and steel plants in the area. And it has been active since 1970.

As a country being active in this sector for a long time and as an experienced country, Turkey is the most advantageous country in its territory. In this respect, the acceleration of the ISO 30000 environmentalist and safe ship dismantling standardization activities, and the operation of the certified corporations will be of great benefit to the ship recycling industry.

With the understanding of serving to contribute to the development of our industry in line with the needs of the sector, Türk Loydu has started its certification activities in accordance with





the ISO 30000 standard. With its experience in maritime and the certification sector and with its qualified staff and knowledge, Türk Loydu has completed its infrastructure regarding the required documentation and audit and now is ready to serve in providing certification for the ship recycling sector.

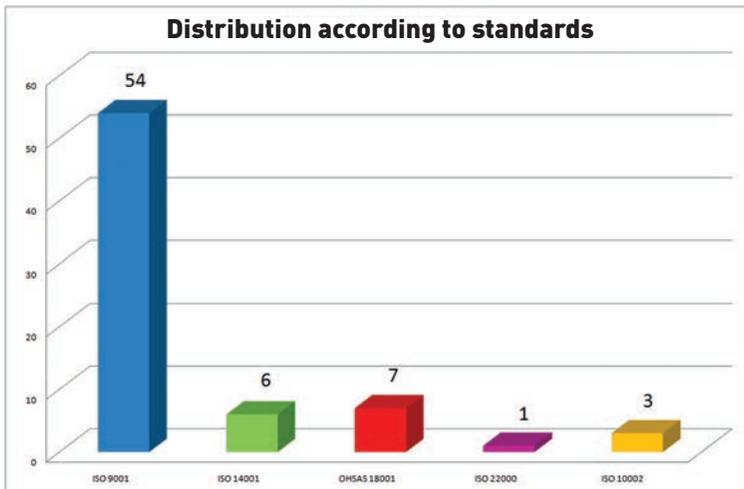
### CERTIFICATION OF THE MANAGEMENT SYSTEMS

71 certifications were issued in 2010 within the scope of the management systems. Also, periodical audit (surveillance) services are provided to certified organizations.

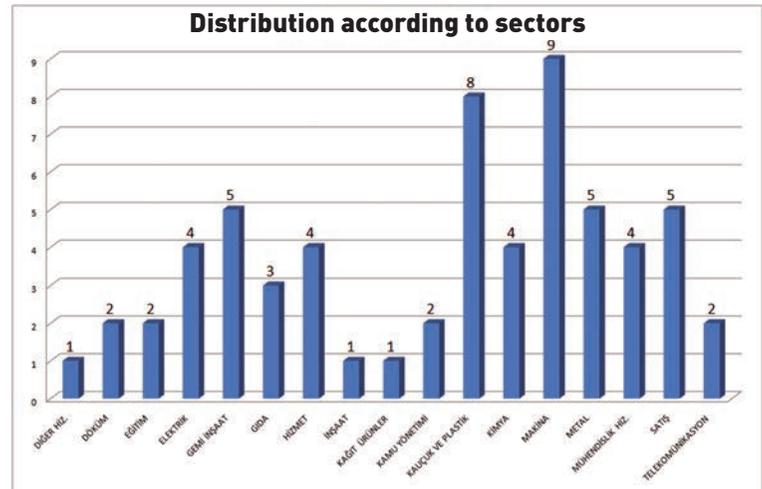
System certifications issued in 2010 according to related standards and sectors are given below:



Distribution according to standards



Distribution according to sectors



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# TÜRK LOYDU FOUNDATION

## I. TÜRK LOYDU SCHOLARSHIPS

**T**ÜRK LOYDU continued awarding non-refundable scholarships and financial aid for undergraduate and post-graduate students studying in the activity fields of Türk Loydu in 2010. Türk Loydu considers the awards of non-refundable scholarships and financial aid to be part of the social responsibility activities. Scholarships are given monthly for nine months, as of the beginning of the academic year (October) to the end of the academic year (June). Non-refundable scholarships continued, as agreed, to be given to 82 students selected to be given those scholarships at the beginning of the academic year 2009/2010.

With the decision taken by the Foundation Board at the beginning of the academic year 2010-2011, the number of students to be provided with non-refundable scholarships has been increased by 25 % in comparison to the academic year 2009-2010. By our foundation, 103 non-refundable scholarships are available, comprising

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of 98 bachelor's degree scholarships, 3 master's degree scholarships and 2 PhD scholarships in the academic year 2010-2011.

The distribution of the scholarships of the academic year 2010/2011 with respect to the institutions is as follows:

- İstanbul Technical University (İTU) Maritime Faculty: 9 bachelor's degrees
- İTU Faculty of Naval Architecture and Ocean Engineering: 24 (21 bachelor's degrees, 2 master's degrees, 1 doctorate degree)
- İTU Faculty of Chemical and Metallurgical Engineering, Metallurgical and Materials Engineering: 2 undergraduate
- İTU Faculty of Mechanical Engineering, All departments: 2 bachelor's degrees
- Karadeniz Technical University (KTU) Sürmene Faculty of Marine Sciences, Department of Naval Architecture and Marine Engineering: 6 bachelor's degrees
- KTU Sürmene Faculty of Marine Sciences, Maritime Transportation and Management Engineering: 2 bachelor's degrees
- Yıldız Technical University (YTU) Faculty of Naval Architecture and Maritime, Department of Naval Architecture and Marine Engineering: 14 (12 bachelor's degrees, 1 master's degree, 1 doctorate degree)
- YTU Faculty of Naval Architecture and Maritime, Department of Marine Engineering Operations: 2 bachelor's degrees
- YTU Faculty of Chemical and Metallurgical Engineering, Department of Metallurgical and Materials Engineering: 2 bachelor's degrees
- YTU Faculty of Mechanical Engineering, All departments: 2 bachelor's degrees
- Middle East Technical University (METU) Faculty of Engineering, Department of Metallurgical and Materials Engineering: 2 bachelor's degrees
- METU Faculty of Engineering, Department of Mechanical Engineering: 2 bachelor's degrees
- Dokuz Eylül University, Maritime Faculty, all departments: 2 bachelor's degrees
- Piri Reis University, Faculty of Engineering, Naval Architecture and Marine Engineering: 2 bachelor's degrees
- Union Of Chambers of Turkish Engineers and Architects (UCTEA )Chamber of Electrical Engineers: 3 bachelor's degrees

• UCTEA Chamber of Naval Architects and Marine Engineers: 8 bachelor's degrees

- UCTEA Chamber of Marine Engineers: 3 bachelor's degrees
- UCTEA Chamber of Mechanical Engineers: 3 bachelor's degrees
- UCTEA Chamber of Metallurgical Engineers: 3 bachelor's degrees
- Association of Turkish Ocean Captains: 3 bachelor's degrees
- Turkish Union of Insurance and Reinsurance Companies: 5 bachelor's degrees

In addition to the scholarships stated above, there are non-refundable scholarships provided for one time only, valid in the academic year 2010/2011 to the following students: a student who is a dependent



of a family which is a member of the Turkish Naval Forces and a victim of the 1999 East Marmara Earthquake, studying in Sakarya University, Faculty of Technical Education in the Department of Automotive Education, a student studying in İstanbul Technical University, Faculty of Naval Architecture and Ocean Engineering, and a student studying an associate degree in Balıkesir University Vocational School, Department of Naval Architecture. Financial aid has been provided for the master education of a staff member of The Undersecretariat of Maritime Affairs at the IMO (International Maritime Organization).

### II - ACADEMIC AND VARIOUS AIDS through RESEARCH and DEVELOPMENT SUPPORT

#### Research and Development Support

Türk Loydu Foundation provides Research and Development



support for people who conduct research at graduate and academic level in the fields which the industry needs and becomes involved in.



#### Research & Development allowances granted in 2010:

- Financial support was given to research assistants at the Faculty of Naval Architecture and Ocean Engineering, İTÜ and to research assistants at the Faculty of Naval Architecture and Maritime, YTU for their scientific activities.
- Compensation was granted to the Faculty of Naval Architecture and Ocean Engineering, İTÜ in order to support the thesis themed "Review of the Coupled Oscillations in Six Degrees Freedom on Ships and its Application on Military Ships".
- The project titled "2D and 3D Examination of a Ship Tank Stirring Problem with the Interpolated Particle Hydrodynamic Method " under Prof. Dr. Ömer Gören, as part of the Industry Theses (SANTEZ) project, was initiated with the cooperation of TÜRK LOYDU and 25 % of the project budget was met by Türk Loydu.

#### Support for the Shipbuilding Sector:

- Our financial support extends to courses for welder training carried out at the "TLV-GISTEM Technical Staff Training and Development Center" founded with the collaboration of Türk Loydu and GİSAŞ Gemi İnşa Sanayii A.Ş., in order to meet the sector's demand for qualified personnel.
- Financial support was provided for trainings organized by UCTEA Chamber of Naval Architects and Marine Engineers at training rooms of the Turk Loydu Foundation for engineering students and engineers.

#### Support for National and International Conferences and Meetings:

- The foundation was one of the financial supporters of the event "Greenenergy 10" led by the Energy Club of the Faculty of Electric and Electronic Engineering, İTÜ.
- Financial support was provided for the graduation ceremony of the Faculty of Naval Architecture and Ocean Engineering, İTÜ.

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- Funding was granted to the Marine Culture Organization for the 3rd International Marine Culture Festival.

- Financial support was provided for the Ceremony of the 5th Altınçıpa (Gold Anchor) Maritime Achievement Prizes given to the organizations that have been involved in successful activities in the maritime sector in recent years.

- Financial support was provided for the Chamber of Marine Engineers for the "1. Innovation in Global Marine Technologies Conference" organized by UCTEA Chamber of Marine Engineers.

- Financial support was provided for the organization of the 10th establishment anniversary meeting of the "Blacksea Memorandum of Understanding" (Karadeniz MOU), held in İstanbul.

- Financial support was provided for the event 'İTU night'.

- Financial support was provided for the Ferry Trip event of the UCTEA Chamber of Naval Architects and Marine Engineers.

- Financial support was provided for the events "Naval Architecture and Marine Engineering" and "Chamber Night" organized by UCTEA Chamber of Naval Architects and Marine Engineers.

- The foundation supported the symposium themed "Naval History of Şile and Şile Lighthouse" led by Işık University.

### Various Aids:

- A donation has been given to Pendik Maritime Anatolian Vocational High School.

- Financial support has been given to the İTU Sailing Club.

- Various awards were given to the students who graduated with the first three highest degrees from the following departments: Faculty of Naval Architecture and Ocean Engineering, İTU; Maritime Faculty, İTU; Faculty Of Chemical and Metallurgical Engineering, İTU; Faculty of Naval Architecture and Maritime, Department of Naval Architecture and Marine Engineering, YTU; Sürmene Faculty of Marine Sciences, Department of Naval Architecture and Marine Engineering, KTU.

- Awards were given to the top three competitors and to the competitor entitled to receive the jury's special award at the 'Creative Ideas Competition' organized by the UCTEA Chamber of Naval Architects and Marine Engineers.

- Financial support was given to the student studying at the Faculty of Naval Architecture and Ocean Engineering, İTU who was the finalist of the '1. Turgutreis Aesthetic, Environmental and Functional Marine Vessel (Ekosiklet) Competition'.

- Financial support was given to the studies on the translation





of the International Maritime Dangerous Goods Code (IMDG) into Turkish, as part of the VIMSAS activities of The Undersecretariat of Maritime Affairs.

### III - PARTICIPATION IN INTERNATIONAL MEETINGS

Participation in international meetings is sponsored to support the sectors in which we are involved:

- Maritime Safety Committee (MSC) 87th and 88th Period



Meetings organized by the International Maritime Organization (Türk Loydu's participation)

- Marine Environment Protection Committee MEPC's 60th and 61st Period Meetings organized by the International Maritime Organization (Türk Loydu's participation)

- Sub Committee on Ship Design and Equipment, 53rd and 54th Period Meetings organized by the International Maritime Organization (Türk Loydu's participation)

- Sub Committee on Flag State Implementations FSI, 18th Period Meeting organized by the International Maritime Organization (Türk Loydu's participation)

- First interim meeting of the Energy Efficiency Precautions Regarding Ships Study Group organized by International Maritime Organization (Türk Loydu's participation)

- Effective Class study group meeting organized by European Maritime Equipments Council (EMEC) (Türk Loydu's participation)

- Support has been given for the participation of the İTÜ Faculty of Naval Architecture and Ocean Engineering Academic Member Prof. Dr. Metin Taylan and YTU Faculty of Naval Architecture and Maritime Academic Member Prof. Dr. Hüseyin Yılmaz to the 52nd Term Meeting of Stability, Loading Limit and Safety of the Fishing Boats (SLF) Sub Committee organized by the International Maritime Organization.

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# TRAINING ACTIVITIES

In order to meet with the training needs of the sectors for which we provide industrial service (Marine, Ship and Yacht Building, Energy, Production, Food, Transportation, Defense Industry etc.) the training programs that we organize in the scope of developing technical and legal regulations are continued in 2010 as well. The trainings can be separated as publicly available trainings and trainings organized according to the need of the corporations, societies and governmental agencies (the Undersecretariat of Maritime Affairs, General Directorate of Coastal Safety, Police Department etc.)

The numbers regarding the trainings organized in 2010 as publicly available trainings and trainings organized according to the requirements of the corporations /firms are given below. The variety of the training is enhanced, and compared to 2009 the amount of organized training has increased by 16 % and the number of the participants has increased by 17%.

**Total Number of Training sessions that have been organized: 50**  
**Total number of participants: 762**

Total amount of training organized in 2008, 2009 and 2010 and the total number of participants are given in the illustration below.



TÜRK LOYDU has been performing its training activities extensively and affectively taking into account the needs of the relevant sectors in 7 training rooms, one of which is computerized and has been in use since the last quarter of 2008, in addition to the Prof. Dr. Teoman ÖZALP Conference Hall in which training programs had been previously performed.

### ORGANIZED TRAINING PROGRAMS

#### Intended for Management Systems;

■ Informative/basic and internal auditor training given according to "ISO 9001 Quality Management System", "ISO 14001 Environmental Management System", "OHSAS 18001 Occupational Health and Safety Standard", "ISO 22000 Food Safety Management System", "ISO 10002 Customer satisfaction -- Guidelines For Complaints Handling In Organizations", "ISO 30000 Ship Recycling Management Systems" standards and Integrated Management Systems training formed by the combinations of these standards.

■ "Process Management and Enhancement" and "Refreshing and Experience Sharing for Internal Auditors" trainings.

#### Intended for environmental protection and sustainable life:

■ "ISO 14064 series of Greenhouse Gas Emission and Removals" standard trainings

■ "Environmental Legislation" trainings

#### Intended for health and safety at work:

■ "Health and Safety at Work Legislation" and "Health and Safety at Work Awareness" Trainings.

#### Intended for Welding Technology and its Applications:

■ Theoretical and applicable refresher training organized depending on the demands of the Corporations regarding various connecting/welding technologies (Plastic welding, Electric Arc Welding, Gas Metal Arc Welding, TIG Welding, Hard and Soft Soldering etc.) where the related standards are also considered;

■ TS EN ISO 14731 Welding Coordination Tasks and Responsibilities Information Training.



■ ISO 3834 serial Quality Requirement standards training for Fusion Welding of the Metallic Materials.

#### Intended for Maritime and Shipbuilding Maintenance and Repair Industry;

■ Within the scope of the International Safety Management Code (ISM Code) "Application", "Auditor" and "Risk Analysis/Risk Evaluation/Risk Management" trainings.

■ "MARPOL, International Convention for the Prevention of Pollution from Ships" training.

■ "TMSA2 Tanker Management Self Assessment" information training

■ "MLC, 2006 ILO Maritime Labour Convention" training (Also has been provided for Turkish Republic the Undersecretariat of Maritime Affairs staff).

■ "Load Line Surveys" training (Provided for Turkish Republic the Undersecretariat of Maritime Affairs staff).

■ "New Construction Surveys" training (Provided for Turkish Republic the Undersecretariat of Maritime Affairs staff).

■ "Yacht and Wooden Boats Construction/Classification and Recreational Crafts Regulation" training (Provided for Turkish Republic the Undersecretariat of Maritime Affairs staff).

■ "Supervision Control for Preventing of Fuel Smuggling in Ships" training (has been organized on 27 January 2010 and 17 June 2010 for Istanbul and Kocaeli Police Department Maritime and Port Branch Office staff).

■ - Training that has been organized on 17 – 18 June 2010 for Turkish Republic the Undersecretariat of Maritime Affairs staff within the scope of the "Regulation regarding Procedures and Principles to be applied during Construction, Repair, Maintenance and Renovation of the Ship and Water Crafts"



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### Training provided within the frame of the special needs of the industry:

■ Trainings/Seminars related to the scope of activities of the Corporations/Firms (“The Training Course in Filling, Operating and Maintenance of Pressure Vessels containing Helium”; “Information Seminar of Pressure Vessels and Basic Pressure Vessels Directives”; “The Training Course in Crude Petroleum Jetty Metering Systems Operation, Maintenance and Reparation”)

### UTILISATION of TÜRK LOYDU TRAINING/SEMINAR ROOMS WITHIN THE SCOPE OF EXTERNAL DEMANDS

Our training rooms, considering the requirements of the sectors in which we are operating are brought into use for training, courses and similar activities of various organizations, institutions and companies. Some of the main ones are as follows:

■ A training room was assigned for the Seminar “Non-Destructive Testing in Naval Architecture” organized by UCTEA Chamber of Naval Architects and Marine Engineers on 16 January 2010.

■ A training room was assigned for the Course on “PSPC - Ship Painting Inspection” organized twice in 2010, in cooperation with the UCTEA Chamber of Marine Engineers, Turkish Republic Undersecretariat of Maritime Affairs and MEB Pendik Maritime Anatolian Vocational High School between 15-20 February 2010 and 04-09 October 2010.

■ A training room was assigned for the Seminar “Hydraulic and Pneumatic” organized by UCTEA Chamber of Marine Engineers on 27 February 2010.

■ A training room was assigned for “IMO and International Conventions” Seminar organized by UCTEA Chamber of Naval Architects and Marine Engineers between 6-13 March 2010.

■ A training room was assigned for the Course on “Degasification” organized in cooperation with the UCTEA Chamber of Naval Architects and Marine Engineers, Turkish Republic the Undersecretariat of Maritime Affairs and MEB Pendik Maritime Anatolian Vocational High School between 05-10 July 2010.

■ A training room was assigned for the Seminar “SME Research & Development Support Program” organized by UCTEA Chamber of Naval Architects and Naval Architects and Marine Engineers on 29 September 2010.

■ Training rooms are assigned with a utility charge for “Professional Development and Orientation Courses” organized for shipyard workers by Turkish Association of Ship Industrialists (GESAD) since May 2009, as part of the prerequisite that workers who are employed in heavy and dangerous jobs in the shipbuilding, maintenance and repair sectors must have an Occupational Training Certificate required by the Ministry of Labor and Social Security. Courses are mostly given on subjects such as “ship welding works”, “ship assembly works” and “ship painting and scraping works”. It was stated by the GESAD authorities that the number of participants in the professional development and orientation courses organized by GESAD have reached approximately 6,000 workers since the first course organization in May 2009 up to the end of 2010.



