



UNDERSTANDING NEEDS DELIVERING SOLUTIONS

Specialists in:

Repairs & Maintenance of:

- Boilers
- Economizers, HRSG, WHRB
- Heat Exchangers, Condensers & Coolers
- PHE

Services of:

- Refractory & Insulation
- Automation
- Chemical Cleaning

Manufacturers of:

- Expansion Joints – Bellows
- ASME Certified Pressure Vessels



Boilers Our Speciality

**AL MUFADDAL ENGINEERING &
MARINE SERVICES CO. LLC.**



**BOILERS OUR
SPECIALITY**



MESSAGE FROM THE CEO



It gives me immense pleasure to introduce Al Mufaddal Engineering & Marine Services Co. LLC, established in Dubai U.A.E. in the year 2004 with the vision of our Founder and Chairman, Mr. Shabbir Shujaiddin, a prominent businessman from India, who has successfully set-up and operated several businesses and formed strategic alliances in India, UAE, Egypt & Bahrain, and still continues to motivate and strategize these businesses with innovation, wisdom & values which he has garnered from his late father.

Our key objective at Al Mufaddal is to provide our customers with exceptional quality and precision workmanship, keeping the economics in mind and of course timely repair services for all types of Marine, Power Plant & Industrial Boilers & Economizers.

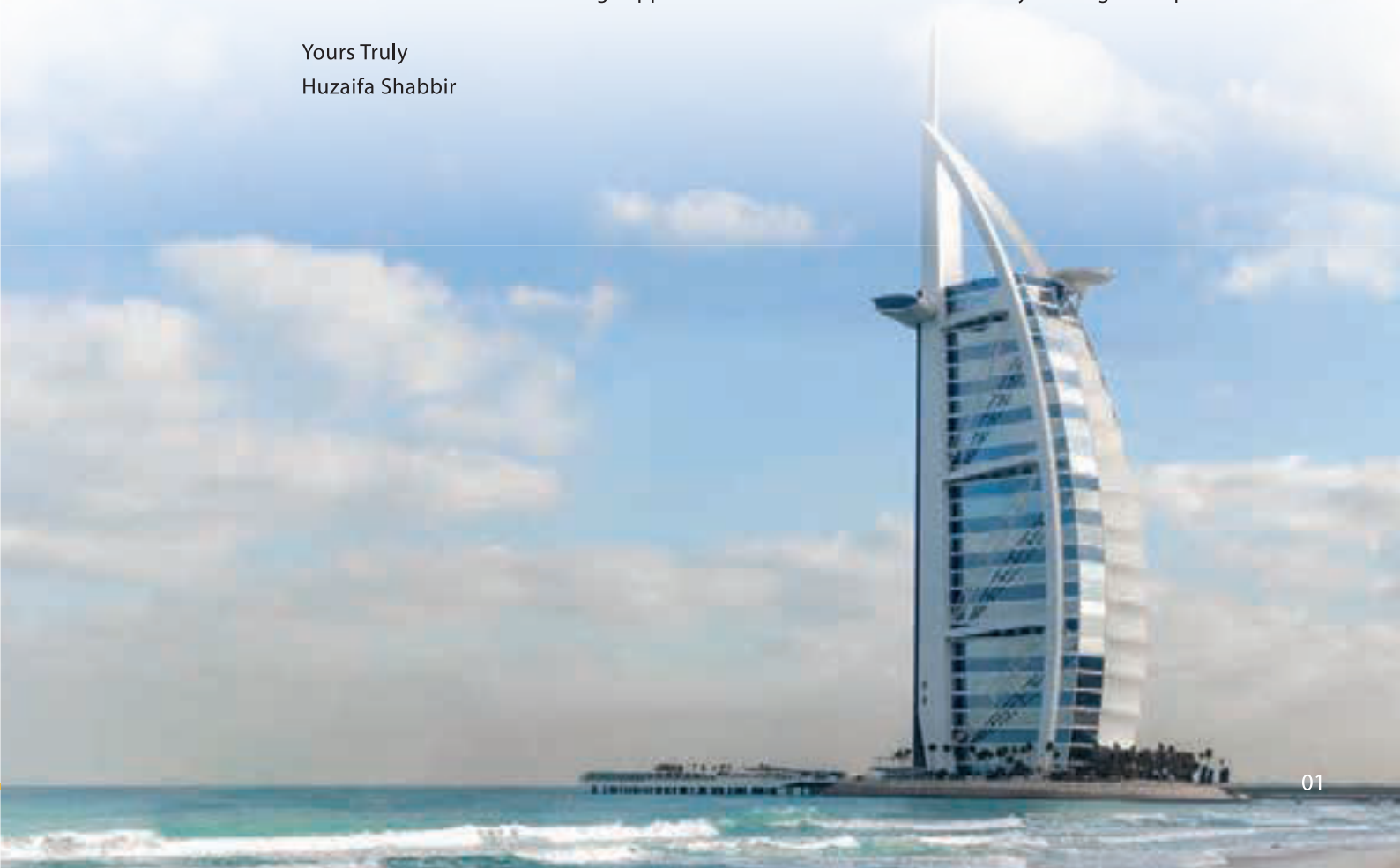
*"There is no substitute for hard work, no compromise for quality
and no short-cuts to success"*

With these traditional principles, in a short span of time, Al Mufaddal has evolved from a small Emergency Boiler Repair company to one of the most Preferred Holistic Solutions Provider in the Middle East for Steaming Solutions & Automation services including pipe line fabrication, valves & pump repairs and overhauling.

Al Mufaddal's rapid growth is the result of outstanding teamwork by our employees, who are undoubtedly the company's most valuable assets. Their dedication, professionalism and customer-oriented performance have led the company to the pinnacle of our industry.

On behalf of Al Mufaddal, I would like to express my sincere appreciation and gratitude to all our customers for their unwavering support which has assisted us enormously in our growth path.

Yours Truly
Huzaifa Shabbir



INTEGRATED MANAGEMENT SYSTEM

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

QUALITY MANAGEMENT SYSTEM (ISO 9001)

Al Mufaddal Engg & Marine Services Co. LLC, is committed to provide their clients with a high level of professional service, including rapid and flexible response to their requirements.

It is the policy of the company to ensure that each project activity is undertaken and executed to the highest standards and conforms to both client requirements and satisfaction and industry best practices.

Implementation of this policy is the responsibility of every member of staff throughout the organization. All employees are made aware of the importance of achieving of this policy, which is reviewed periodically to ensure its continued suitability and applicability to the company's activities.

The Quality system fully supported by the senior management, together with the supporting procedures and work instructions ensures that activities are controlled in a manner compatible with achieving contractual obligations effectively.

QUALITY OBJECTIVES:

- Our Quality objectives are designed to challenge the organization through continual improvement, innovation, to provide services to the highest standards and a passion for results.
- To ensure that our services meet our clients satisfaction and where possible exceed their expectations.
- To communicate clearly our policies, strategies and objectives to all parties involved.

ENVIRONMENTAL MANAGEMENT SYSTEM (ISO 14001)

We recognize the necessity for responsible environmental management and conservation of resources. Pollution prevention, recycling, and reduction of all types of waste and emissions are integral parts of Al Mufaddal's environmental waste management program.

We remain committed to maintain EMS system which meets the requirements of ISO 14001:2015.

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM (ISO 45001)

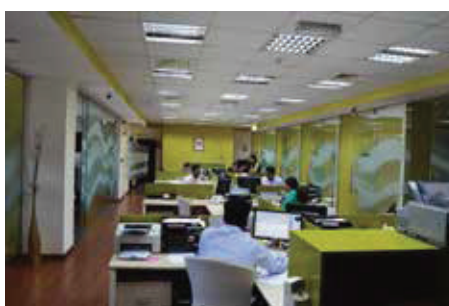
Al Mufaddal has established an Occupational Health & Safety Management System based on the principles of ISO Standards.

Have a systematic approach to QHSE management, designed to ensure compliance with all prevailing laws and regulations to pursue the goal of zero harm to people.

We encourage participation & consultation of Al Mufaddal employees for identifying and eliminating hazards to reduce Occupational Safety & Health risks.

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018





Al Mufaddal Engineering & Marine Services Co. LLC is a member of **Al Mufaddal Group (AMG)** controlled & managed by one of the leading business families operating with over 5 decades of accumulated goodwill.

Al Mufaddal is a specialized engineering company committed to provide a complete range of services for inspection, repairs and maintenance of all types of boilers and heat transfer equipment. These services include tube bending / manipulation, retubing, supply and installation of refractory and insulation materials, including high and ultra-high water pressure jetting services. An independent Automation Department enables offering the complete service package.

Al Mufaddal has the expertise and facility to carry out piping work to meet international standards, our capability includes designing, fabrication, and installation for marine, oil & gas industries, chemical, desalination and power plants.

Al Mufaddal has qualified and trained engineers who are capable of exceeding the expectations of our customers for the most demanding, responsible and under pressure jobs.

Certified welders approved by Lloyd's are conversant with the latest welding procedure like GTAW (TIG), GMAW (MIG), SMAW (Submerged Arc) and capable to carry out most complex jobs in confined spaces with ease in the shortest time, satisfying all class requirements.

Our team of specialist with complete sets of equipment and know-how, backed by a large inventory of class certified boiler tubes, finned tubes for economizer, corten steel plate, refractory, insulation & lagging material are ready to perform round the clock (24x7) enabling fast turn around and shortened down time.

Whatever the scale of the project, Al Mufaddal provides a combination of engineering know-how and professional commitment to ensure that our customers' plant/equipment is operating to the satisfaction of any mandatory requirements.

Today, Al Mufaddal is recognized established as one of the preferred & reliable engineering facility for whom price, exceptional quality and job completion within stipulated time are of paramount importance.

Al Mufaddal, in August 2013, has obtained accreditation of ASME code symbols "U", "S" and "PP" and the National Board "R" and have the expertise and necessary infrastructure to manufacture a wide range of pressure vessels, custom built to fulfill code and client's individual requirements.

■ BOILERS



INSPECTION

To cater to the needs of clients most effectively, inspection is carried out during port stay or sailing by trained & qualified engineers who have extensive experience in boiler repairs. Sophisticated equipments like video scopes, ultrasonic thickness gauging and magnetic particle inspection (MPI) may be used depending upon the nature and purpose of inspection.

REPAIRS

We combine our vast experience, perfection and proven process to deliver quality boiler repair services during planned or emergency outages for Power Plants and during dry-docking, anchorage lay by or Sea voyage to save costly downtime or off hire for the shipping industry. Skilled Boilermakers & Certified welders with an experience of minimum 20 years ensure that repairs are carried out keeping in mind the critical application of the equipment.

PREVENTIVE MAINTENANCE

Regular servicing is the best way to ensure your boiler is operating efficiently and at the optimum level. At Al Mufaddal, we provide a unique proactive maintenance program which pays dividends in not only peak boiler performance but also in the overall safety of those working in the boiler plant. This type of maintenance approach uses scientific testing techniques and analysis to anticipate and correct, by either repair or replacement, problems before they arise.



SERVICES OFFERED INCLUDE, BUT ARE NOT LIMITED TO

- Complete or partial retubing of water tube or fire tube boilers, air pre-heaters, economizers, super heater elements, heat exchangers, condensers, tube bundles.
- Short term plugging of leaks
- Replacement or repair of tube plates
- Tube replacements
- Access type repair or replacement
- Furnace tube repair or replacement
- Replacement of mud or manhole rings
- Thermal insulation/Cladding sales and services to Boilers, Incinerators, EGE and IGG
- Casing repairs or replacement
- Boiler section replacement
- Service & refurbishing of boiler mountings
- Burner service and Automation
- Refractory (castable & moldable)/Fire bricks sales and services to boilers and incinerators.
- Mechanical & water cleaning using high pressure jet washing machine.

DNV: Approved for the manufacture of welded Boilers and welded pressure vessels.



ECONOMIZER



Economizers can save a great deal of energy. They can also waste energy if they are not operating properly or are improperly adjusted. Many economizers are not functioning at all or are out of service because they are not well understood by some service technicians. Many service technicians simply disable them. It is essential that economizers are working properly and saving energy rather than increasing costs.

Our team of Expert Engineers is ready to inspect, submit documented report, repair, completely rebuilt, design, install and trace the trouble shooting components for all types of Economizers such plain tube, spiral fin tube, helical fin tube, pin tube, single & double H finned tubes. Our stock of fabrication dies allow us to provide everything from superheater elements to single bends.



SUPER HEATER

One of the most important accessories of a boiler is a super heater. Steam will leave the water at its surface and pass into the steam space. Steam formed above the water surface is always saturated and cannot become superheated in the boiler shell, as it is constantly in contact with the water surface. If superheated steam is required, the saturated steam must pass through a superheater. This is simply a heat exchanger where additional heat is added to the saturated steam.



The Superheater increases the capacity of the plant, eliminates corrosion & reduces steam consumption of the steam turbine.

We have the expertise and facilities to fabricate Superheater coils in most complicated shapes, gauge and size and the craftsmanship to install in most confined places within a stipulated time. Depending upon the temperatures we can offer different grades of tube material from stock.



REFRACTORY & INSULATION

REFRACTORY

Whether you need regularly scheduled maintenance, or have an unexpected outage – Al Mufaddal has a professional team who offers the highest quality standards and performance on every project installing either refractory bricks, castables, ramming or gunning materials.

Our company has experience in the sales and installation of refractory materials and our "team" oriented approach to reducing our customers' downtime has set a new standard of service in the industry. We understand that relationships are built on trust and backed by performance. Al Mufaddal knows what is expected during the critical time of an outage and realizes that working as a TEAM gets you back on line faster – minimizing downtime and maximizing the runtime of your unit.

We specialize in the refractory lining, installation and repair for boilers, incinerators & exhaust stacks.

We have a good range of refractory materials available from stock:

CASTABLES - FIREBRICKS - INSULATING BRICKS - CERAMIC FIBRE BLANKET





Thermal Insulation Services (Lagging Services)

Reduce your fuel bills and carbon footprint with efficient thermal insulation.

Al Mufaddal offers a complete range of insulation services for all types of pipework plant and equipment, conserving fuel and energy costs through properly applied and efficient insulation and cladding. We can provide a low cost lagging service from small plant room lagging installations up to overall site maintenance contracts for increased thermal efficiency of insulated plant coupled with complete marine insulation services.

Our Insulation services include :

- Marine insulation of engine exhausts and generator exhausts including boilers, economizers, cargo heaters etc.
- Steam, condensate, cooling water, chemical services, all pipework services, all sizes.



HEAT EXCHANGER CONDENSORS COOLER



HEAT EXCHANGER CONDENSORS COOLER



"We do renovation of shell and tube heat exchangers such as repair of steam condensers, lub oil coolers, cargo heaters & condensers, multi stage SW evaporators, and refrigerant condensers.

In our workshop we renovate tube and shell heat exchanger with new tube elements and/or shell. The heat exchanger will be fitted with new insulation if necessary. Complete re-tubing of tube bundles, are also offered. Our preference is to re-tube/refurbish in our own workshop where the work can be carried out under factory conditions. Where this is not possible in-situ repairs can be arranged.

We have some of the most up to date equipment for tube pulling to undertake partial re-tubing and an experienced team of engineers which guarantees outstanding quality work at competitive prices.

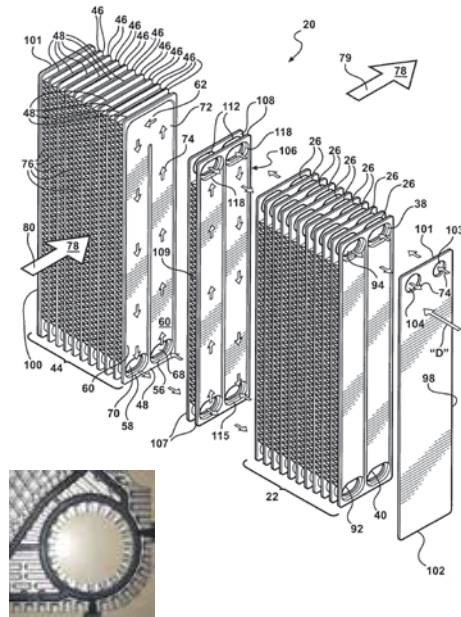
We have a track record of repairing and retubing condensers A.S.A.P. to make sure the vessel reaches the next port of call just in time."



PLATE HEAT EXCHANGER (PHE) & FRESH WATER GENERATOR

SERVICES

We offer complete plate heat exchangers testing and repair for the refurbishment of plate heat exchangers that encompasses dismantling, chemical cleaning, crack detection and a visual examination of the plates, re-gasketing, re-assembly and pressure testing. Our service centre has the ability to restore your plates with best possible results. To facilitate these services we can supply through our network of sources worldwide, plate packs on exchange/ loan basis for P26, P36 & DPU 36 units at a very reasonable price. Complete Reconditioned Freshwater Generator of DPU with New Condensor and Evaporator for Titanium Plates is also available.



SPARES SUPPLIES

- Brand new non OEM nirex titanium plates & gaskets interchangeable to alfa laval model P26 & P36
- Brand new original & non OEM Plates in 304/ 316 & titanium and gaskets suitable for APV & GEA PHE'S.
- Brand new PHE plates in 304/316 applicable to the marine & other industries for Alfa Laval, Tranter, VICARB, Schmidt Breton can be arranged
- Replacement spares for Atlas, Sondex & Alfa Laval Fresh Water Generators (Distillers)
- Brand New Distillate Pump (PVVF, ESD) Ejector Pump (CNL type), spare shafts, wear rings, Non return valve, diaphragm, pressure gauges, clamping bolt & clamping nut, thermometer W/Pocket rubber sleeves, Non return flap valve in NBR/EPDM are also available.



Al Mufaddal Engineering & Marine Services Co. LLC (ALMEMSCO) after nine successful years in marine engineering and services field have now forayed into manufacturing of Pressure Vessels to ASME Code. We have certificates of authorization for the use of ASME's Code Symbols – "U", "S", and "PP" for new construction and the National Board's "R" symbol for alterations and repairs at both work shop as well as at field sites.



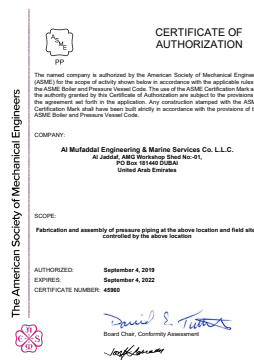
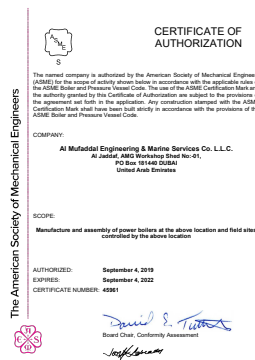
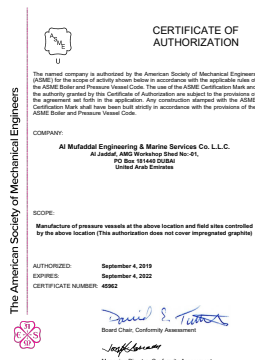
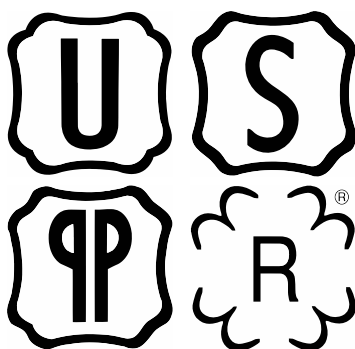
- **"U" ASME Stamp** : Manufacture of Pressure Vessels at our location and field sites controlled by our location
- **"S" ASME Stamp** : Manufacture and assembly of power boilers at our location and field sites controlled by our location
- **"PP" ASME Stamp** : Fabrication and assembly of pressure piping at our location and field sites controlled by our location
- **"R" National Board** : Metallic repairs and/or alterations at our location and field sites controlled by our location

We have the expertise and necessary infrastructure to manufacture a wide range of ASME coded pressure vessels, some as listed below, each custom built to fulfill the code and client's individual requirements for both onshore and offshore use.

- » Air Receivers
- » Surge & knock Out Vessels
- » Columns / Evaporators
- » Heat Exchanger



ASME Accreditations



POST WELD HEAT TREATMENT (PWHT)



Post Weld Heat Treatment (PWHT) is a controlled heating and cooling process performed after welding/machining to improve the chemical / mechanical / metallurgical properties of weldment / machined surfaces, generally termed as Stress Relieving.

Al Mufaddal brings the same uncompromising, cost-effective standards of quality and safety to each and every job. Utilizing a wide range of technologies, trained technicians manage heat-treating flow and temperature requirements with pinpoint precision. From small, complex fittings to massive pressure vessels and turbines, AL MUFADDAL ENGG provides the best possible

solutions for all heat-treating applications. Some of the advantages of using AL MUFADDAL ENGG services are:

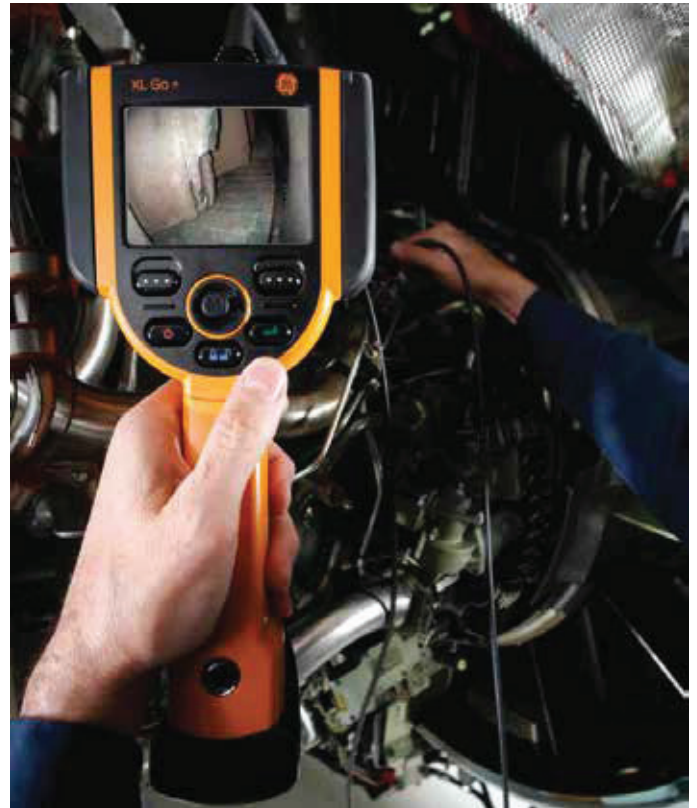
- Well established, customer oriented service company in Dubai, U.A.E, known for its dedicated service in the heat treatment for years.
- Has vast experience in providing on-site PWHT services to various industrial sectors all over U.A.E.
- Has the ability to meet all of your pre and post weld heat treatment needs.
- Has a team of highly skilled and trained welding specialists who ensure the structural integrity of the vessel or unit during treatment with ease, meeting all welding code requirements.
- Employs advanced, PLC controlled portable PWHT equipment that is readily available for deployment in your area / work site within shortest span of time, and helps achieve the precise control needed to get the maximum benefit from the treatment.
- Takes pride themselves on providing the highest level of service and attention to detail that every project deserves.



DIGITAL VIDEO BORESCOPE

Al Mufaddal Engg is equipped with portable, highly advanced VIDEO BORESCOPE, latest technology currently available in the industry, that delivers sharp, high resolution, clear digital images to tackle inspections in small, hard to reach places like inspection of pipelines, gas turbines, steam turbines, steam generators, heat exchangers, automotive engines, underground sewer lines, etc. It can detect any damage or defects of up to a length of 10 meters with a 360 degree articulation allowing for navigation in tight applications without disassembly ensuring unlimited inspection access and unprecedented ease of use.

Inspection results can be viewed online or captured as high - resolution images or MPEG4 video for analysis or collaboration.



AUTOMATION DIVISION

AL MUFADDAL ENGG has been offering comprehensive solutions in AUTOMATION, since 2009, to its Marine and Industrial clients successfully. Our long-term experience in the Boiler industry, close relationship with the manufacturers, plus training at the factories enable us to provide economical, cost-effective and time bound services in the professional manner.

Our team of experienced and trained professionals in the field is well equipped to undertake service jobs at short notice and ready to meet challenges that present themselves at any time.

BOILER AUTOMATION SERVICES

We offer quick and reliable solutions in Boiler automation to get your boilers up and running at minimum downtime period. We have the expertise to help you run your boilers at peak efficiency with maximum energy savings and lower emissions levels for the following makers of BOILERS:

- MITSUBISHI
- AALBORG / WARTSILA
- SUNROD
- HTI
- KAWASAKI
- BABCOCK and many more.

Some of the services and solutions that we offer in Boiler Automation are :

- Troubleshooting and repair
- Fine tuning of boiler system to achieve maximum efficiency and reliability
- Parts supply
- Control System upgrade
- System modification/Retrofit works
- Safety system condition survey
- Maintenance and service

OTHER AUTOMATION SERVICES

We also provide comprehensive solutions to following specialist marine & industrial machineries in addition to Boiler services:

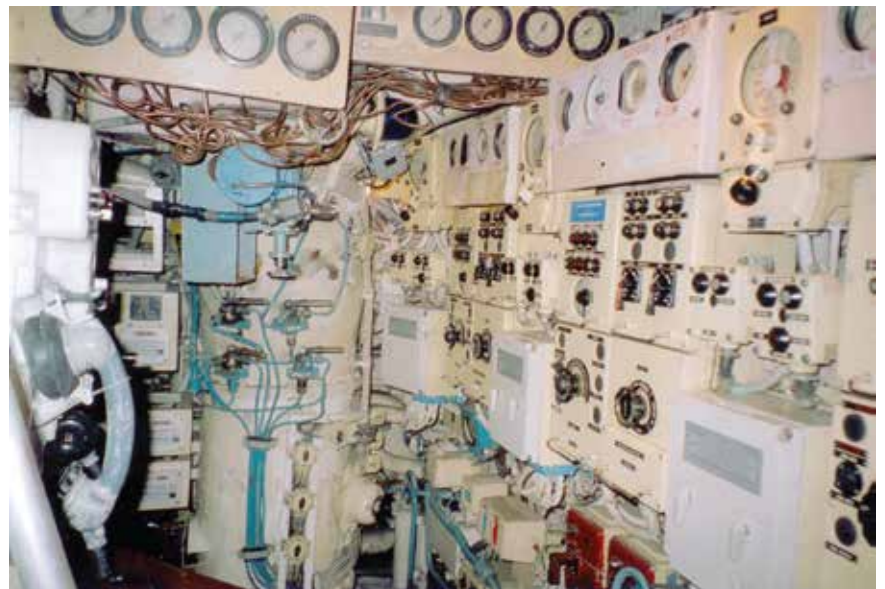
- INERT GAS GENERATOR (IGG)
- INERT GAS SYSTEM (IGS)
- INCINERATOR
- CALORIFIER
- NITROGEN GAS (N₂) GENERATOR
- ALARM MONITORING SYSTEM
- MAIN ENGINE CONTROL AND SAFETY SYSTEM
- OXYGEN ANALYZER
- GAS ANALYZER

SYSTEM & EQUIPMENT SALES

In addition to above services, we are able to supply complete system, parts and accessories for boilers, burners and related machineries at very competitive price and fast delivery time.



MT SINA-INCINERATOR REPAIR



DURABLE JOINING SOLUTIONS FOR RIGID APPLICATIONS

- Available in all types of Stainless Steel grades
- Sizes available from DN 100 to DN 3200
- Minimum Design Temperature -165°C
- Maximum Design Temperature 680°C
- High Pressure up to 40 Bar
- Type approval from Bureau Veritas & Nippon Kaiji Kyokai
- LPG/LNG Type approval from BV & NK

CUSTOMIZED BELLOWS AVAILABLE

- Bellow Elements with collar
- Axial/Lateral/Angular expansion joint
- Universal expansion joints
- Exhaust expansion joints
- In-line pressure balanced expansion joints
- Rectangular expansion joints
- Expansion joints for LNG/LPG carriers
- High pressure steam line expansion joints

INDUSTRIES SERVED

OIL AND GAS PLATFORMS - POWER PLANTS - STEEL PLANTS
- CONSTRUCTION - CEMENT PLANTS - NUCLEAR PLANTS - MINING.

MARINE APPLICATIONS

MARINE DIESEL ENGINES
BOILERS & INCINERATORS
GAS & EXHAUST SYSTEM
AUXILIARY PIPING SYSTEM

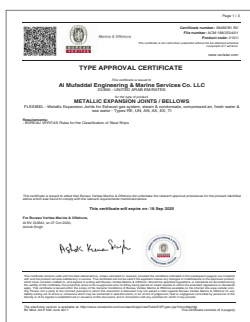
Flexibel Bellows absorbs thermal expansion & vibrations in the pipeline. It significantly improves the service life of pipelines & connected equipments. It has a capability to withstand the high offset motions, misalignment & vibratory conditions.

Flexibel Bellows are resilient towards pressure & temperature. An anti corrosion substitute for joining solutions with zero maintenance and heat & friction losses.

Flexibel Bellows is a perfect balance of Strength & Flexibility.



Type Approval Certificates



RAW MATERIAL STOCK

AL MUFADDAL understands the need for speed in supplying replacement products for power plant equipment & the shipping industry. This is especially true for boiler pressure parts as the inability to replace failed or deteriorating tubing quickly, can lead to expensive downtime. With the largest in-shop inventory of Boiler Tubes in Middle East, Al Mufaddal provides both scheduled and emergency tube replacements.

AL MUFADDAL maintains stock of prefabricated bent replacement tubes, U-bends, C-bends for superheater, reheater, economizers and waterwall circuitry enabling timely delivery and reducing downtime. Our prefabricated stock program is another example of Al Mufaddal commitment to provide products and services to improve performance and reduce maintenance.

Computerized inventory procedures ensure that high levels of services are maintained. If materials are not available, either from stocks or local sources, it can be obtained from worldwide

suppliers at the right time & right price.

An extensive inventory of the following raw material is maintained at all times:

- Seamless Boiler Tubes in different grades & sizes.
- Heat Exchanger Tubes in Stainless Steel, Al Brass, Cu Ni & Carbon Steel
- Fin Tubes – Spiral, Helical, Serrated, Single & Double H Fin
- Pin Tubes
- Corten Steel Plates – for Boiler casing & uptake exhaust funnels
- Boiler Grade Plates – for furnace shell, steam & Water drum.
- Naval Brass Plates – for Main Engine Air cooler, Condensor Tube Plates
- Refractory Materials – for Boiler & Incinerators
- Insulation/Lagging Material
- Exhaust and Steam Bellows
- Kangrim Boiler & Burner Spare Parts
- Spiral Wound Gaskets, Manhole & Hand hole Gaskets



LIST OF MACHINERY & EQUIPMENTS

(IN HOUSE FACILITIES)



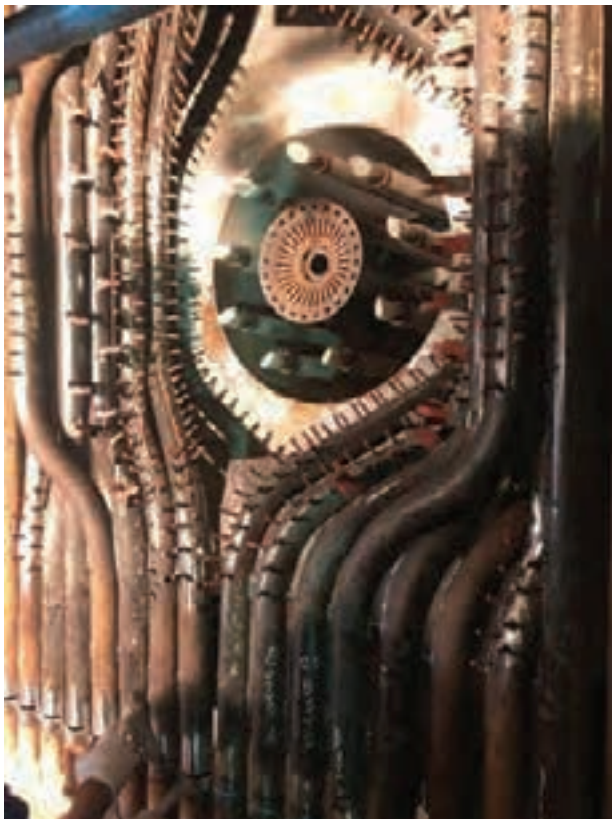
Al Mufaddal is a professional managed company with well equipped workshops and qualified marine & mechanical engineers, skilled technicians who are well versed in operating the state-of-art machine in our workshop.

Some of our in-house equipments :

- | Name of Machines | |
|--|---|
| ● CNC WATER JET PROFILE CUTTING MACHINE 6 X 3M, ITALY. | ● RADIAL DRILLING MACHINES. |
| ● PLATE ROLLING MACHINE 20 X 3M, HIMALAYA INDIA. | ● HYDRO JETTING MACHINE, HAMMELMANN GERMANY |
| ● PRESS BRAKES 12 X 3M. | ● PROFILE GAS CUTTING MACHINE, KOIKE USA. |
| ● SHEAR / GUILOTIN MACHINE 13 X 3M. | ● MANUAL PLASMA CUTTING MACHINES, TELWIN ITALY / ADOR INDIA. |
| ● CNC LATHE MACHINE 700 C TO C. | ● PIPE BEVELLING MACHINES, KRAIS POLAND. |
| ● SEMI AUTO QUICK TUBE PULLER MACHINE, SUGINO JAPAN. | ● ELECTRIC COMPRESSOR 12BAR/760 CFM, ABAC ITALY. |
| ● SEMI AUTO ORBITAL TIG WELDING MACHINE, AMI USA. | ● DIESEL GENERATOR 160 KVA, OLYMPIAN UK. |
| ● CLEVELAND IRON WORKER 100T, USA. | ● PWHT / HEAT TREATMENT FACILITY, STORK NETHERLAND. |
| ● BOILER TUBE BENDING MACHINE. | ● VARIOUS WELDING & CUTTING MACHINES, ESAB SWEDEN / MILLER USA. |
| ● HYDRAULIC SWAGGING MACHINE. | ● SEMI AUTO BAND SAW – 1000, TURKEY. |
| ● POWER PRESS MACHINE 400 TON. | ● SEMI AUTO ST.EXPANSION BELLOW MACHINE. |
| ● CONVENTIONAL LATHE MACHINES. | |
| ● MILLING MACHINE. | |



SPECIALISED SERVICES



INSTALLATION OF GAS BURNER & BURNER
DEFLECTION IN A 65 TON GE ALHSTROM BOILER



INSTALLATION OF GENERATING TUBES
IN MAC 25 BOILER



FABRICATION OF FRONT WALL FOR GE
ALHSTROM BOILER/ DEWA 65 TON/HRS



ROLLING OF FURNACE COIL FOR A
BABCOCK/WANSON BOILER AT DUCAB

EXHIBITIONS
CORPORATE SOCIAL RESPONSIBILITY



SEATRADE 2004



SEATRADE 2006



SEATRADE 2010



SEATRADE 2012



POSIDONIA 2014



ADIPEC 2018



Keep Jaddaf Clean - Initiative Appreciation



www.almufaddalboiler.com

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- Marine & Offshore
- Oil & Gas
- Power Plants
- Industrial
- Construction

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