Certified by LLOYD'S, DNV, GL, RINA, NK, BV, ABS for boiler repairs and our welding procedures capacity













# MARINE BOILER REPAIRS Ltd.

MARINE & INDUSTRIAL BOILER AND HEAT EXCHANGER REPAIRS & SPARE PARTS, GAS PIPE LINES WELDING & CONSTRUCTION, REFRACTORY, INSULATION, INCINERATORS REPAIRS, IGG REPAIRS, EXPANSION BELLOWS & BOILER MOUNTING CONSTRUCTION AND REPAIRS, CHEMICAL CLEANING SERVICES

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# **COMPANY PROFILE**

MARINE BOILERS REPAIRS, MAINTENANCE & CHEMICAL CLEANING,
HEAT EXCHANGERS REPAIRS, MAINTENANCE & CHEMICAL CLEANING,
PIPE LINES AND HEATING COILS WELDING, REPAIRS & CHEMICAL CLEANING,
REFRACTORY, INSULATION & INCINERATOR REPAIRS, IGG REPAIRS,
EXPANSION BELLOWS CONSTRUCTION
SAFETY VALVES REPAIR/ REPLACEMENT



#### **Details & List of MBR Services**

#### **MARINE & INDUSTRIAL BOILER REPAIRS**

- Main & Auxiliary Boilers' tubes, headers, plates replacement repairs
- Economizers, Super-Heaters, Gas Boilers' tubes, headers, plates replacement repairs
- Pre-fabrication, shaping and fining of boilers and Gas boilers tubes in our workshop, ready for easy in situ installation
- Panelling of boiler tubes in our workshop ready for easy in situ installation
- Boiler insulation and refractory renewal
- Boilers condition and remaining life assignment survey
- IGG Repairs

## **CERTIFIED WELDING SERVICES**

- Certified Welding of boilers/heat exchangers /tubing/plates by certified welders and certified automatic machines
- Mass & fast welding industrial refineries' piping by certified mobile orbital automatic robotic welding machines

#### Various

- Stainless steel piping EXPANSION BELLOWS, VALVES, FLANGES, repairs & replacement
- Incinerators general repairs, insulation and refractory renewal
- Heat exchangers (coolers-heaters-condensers) general repairs and re-tubing, similarly to boilers repairs

#### **CHEMICAL CLEANING SERVICES**

- CHEMICAL CLEANING of boilers, heat exchangers, stainless steel tanks, piping etc.
- Pre-commissioning CHEMICAL CLEANING (Pickling and Passivation) of new piping, tanks, boilers and heat exchangers, piping etc.



Figure 1: Tubes ready for Installation



Figure 2: Expansion Bellows



Figure 3: Installation of refractory



Figure 4: Installation of Screen tubes



Figure 5: Tubes ready for dispatch, photo from MBR Workshop at Greece

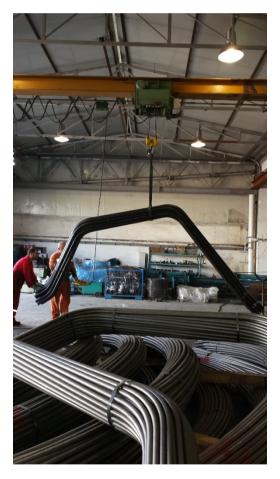


Figure 6: Bridge crane



Figure 7: Spiral finned tubes, photo from MBR Workshop at Greece



Figure 8: Packets of tubes ready for dispatch



Figure 9: Finned tubes, photo from MBR Workshop at Greece



Figure 10: Packets of tubes ready for dispatch



#### 1. BACKGROUND

The company MBR Ltd has been founded in early seventies by Mr. Nick Souvleris offering services in marine boilers' repairs section.

Historically, the company has undertaken numerous projects in the fields of shipping and industry. Today, the company is on top of preference of the Marine Boiler Repairs and Utilities energy facilities, with a strong presence in Greece and abroad.

Marine Boiler repairs Ltd. has gained its experience and reputation by offering very competitive prices and efficiency and by undertaking major re-tubing projects in high pressure Marine Boilers. The company's pioneer creator has never hesitated to invest the company's profit in cooperating with highly educated individuals, in obtaining all needed class approvals or purchasing the most sophisticated updated machinery/tools/equipment.

#### 2. SCOPE

The company undertakes the re-construction, repair and maintenance of energy and marine and industrial hydraulic systems:

- ✓ Main and auxiliary Marine Boilers
- ✓ High pressure and heating industrial boilers
- ✓ Exhaust Gas Economizers and Exhaust Gas Boilers
- ✓ Heat Exchangers: Heaters, Coolers, Evaporators, ETC
- ✓ Piping work
- ✓ INCINERATORS

#### 3. HUMAN RESOURCES

The manpower of the company is skilled, trained and with all the necessary certifications.

The Technical Department and the production department are staffed by graduated and experienced engineers.

Our staff has long experience and has brought out a large number of projects which are certified by classes.

Our welders have all needed certification by Lloyd's Registers, Det Norske Veritas / (DNV), German Lloyds, NKK etc.



## 4. QUALITY ASSURANCE

The needs and requirements of the customer are clearly understood and quality products are stable and consistent with the highest standards. Marine Boiler Repairs has aligned with the assurance standard quality ISO 9001:2000.

In each case the quality of products is tested at all stages of production, and whenever necessary, production process and products are being controlled by classification society recognized research centers and the products are accompanied by corresponding documents:

- Certificates of Classification Societies inspection of the production process, hydraulic tests performed, of the quality of materials used, of the professional staff employed for a specific order
- Destructive and non-destructive testing by recognized research centers and version of the respective certificates:
- Check welds by radiography, magnetic and penetrate test
- Thickness measures
- Chemical analysis of materials
- Checks strength of materials

The Department of Production for each product and repair work prepares the proper documentation for the customer which includes:

- Projects implemented during construction
- Technical description of products / services
- Certificates of the materials used
- Certificates of proficiency of welders
- Certificates quality controls and testing by certified nursing
- Certificates Inspection Classification Societies

So far all the work for the reconstruction and repair of marine boilers are accompanied by a corresponding quality certificate by classification societies.



#### 5. BOILER TYPES AND MAKERS EXPERIENCE

- Mitsubishi Heavy Industries
- Osaka Boilers
- Aalborg
- Green & Sons
- Hyundai
- Ishikawazima Harima Heavy Industries
- Kangrim
- Kawasaki
- Sasebo
- Spanner composite
- Babcock & Wilkox
- Galleri
- Mitsui
- Miura
- Hitachi
- Stocznia Gdanska
- Sasebo
- TPK

The formation of curves are made by CNC bending machines of high accuracy and quality control for the needed accuracy of construction is based on 1 to 1 plan devised to control standards rules. Today we have capacity for bending tubes boilers of any diameter and thickness and any bending radius required.

The common material of the tube is St.35.8/Gr.1 in accordance with standard DIN17175 or the equivalent EN 10216, and always accompanied by the corresponding certificate.

The material for super-heater is 13CrMo44 or 10CrMo9-10 according to standard DIN17175. Our company's policy is to constantly keep reasonable stock in our warehouse of a wide range of boiler tube, which is often hard to find in the Greek market. Thus, the vast majority of our orders are executed in a very short time; inventories of materials are an investment for our company ensuring immediate availability for over 95% of our orders.



## 6. Manufacture of metal parts as furnace

Construction by steel plate material sheet H-II in DIN17175 or equivalent P-265GH in EN10028. Cones burners: Manufacture of refractory cone burner plate for flame resistance up to 14000C, at any size and shape. Swing air diffuser (diffusers).

## 7. Exhaust Gas Boilers

We manufacture boilers exhaust tube panels of any type:

- Simple tubes with spiral fins with square flaps
- Finned tubes
- Tube panels for the boiler exhaust (economizer) with curved spiral and square fins.

## 8. Heat Exchangers

Re-tubing and repairing heat exchangers with materials: Al-Br, Cu-Ni, St / St, MS

## 9. Pipes/ Piping

Heating coils for cargo tanks of tankers (Materials MS, St / St, Al-Br, Cu-N-Fe or stainless steel)

## 10. IGG REPAIRS

- Inner cooling chamber fabrication
- Front cover repairs by our innovative fabrication process



Figure 11: IGG repairs

## 11. Expansion Bellows

Based on our experience and many boilers inspections we carry out every year we conclude that expansion bellows is a boiler's or vessel's in general sector that appears to be in need of repair or even complete replacement. We are able to professionally manufacture and supply any type of expansion bellow for all uses(steam H.P ,exhaust gas bellows etc. ) based on drawing or sample .Bellows made from material SS 316 L or SS 321 and quality documents (class approval certificates of rough material) are available as well as O.D. range capacity 33 mm up to unlimited.



Figure 22: Expansion Bellow



Figure 13: Expansion Bellow



Figure 14: Expansion Bellow



Figure 15: Expansion Bellows



Figure 16: Fabrication of Expansion Bellow

- 11. Gas Air Heaters for very high pressure boilers
- 12. Special tubular structures
- 13. Thermal Oil Heaters

## 14. TECHNICAL IN-SITE OR ONBOARD SERVICES

The specialized team of Marine Boiler Repairs undertake work repairs and installation of industrial & marine plants worldwide. We have four bases with sufficient tools and equipment for repairs in Piraeus, Dubai (UAE), Antwerp and Singapore.

#### The services we provide are:

- ✓ Replacement of boiler tubes (Re-tubing)
- ✓ Replacement of corrugated plates, combustion chambers, cone burner
- Replace boiler exhaust pipes components
- ✓ Replacing of heat exchanger tubes
- ✓ Chemical Cleaning of boilers, heat exchangers, pipelines, heating coils, stainless steel piping/ tanks
- ✓ Maintenance of boilers, including: Cleaning, washing with fresh water and neutralizers boilers etc.
  - ✓ Repair valves, safety valves and certification
  - ✓ Repair refractors and insulation of boilers, EGE and piping



## ✓ Our upgrading business region:

Inspection & maintenance section

- \* in situ & on-board chemical cleaning repairs of marine & industrial boilers, HRSG, incinerators and heat exchangers; removal of water scale, rust deposits, fire & gas soot deposits
- \* Water, steam & combustion conditioning's upgrade & scientific tracking up, including automation and safety
- \* Thermodynamics, heat balance, efficiency upgrades & scientific tracking up, including energy & green gasses saving
- \* Boilers' materials, metallurgic & corrosion surveys/ reports & wastages or failure reasoning ascertains

## 15. FACILITIES - EQUIPMENT-TOOLS

The production is done in our company's factory in the Industrial area of Aspropyrgos/ Greece. We have covered area of 2.000m<sup>2</sup> and plot of 5.000m<sup>2</sup>.

The basic equipment consists of:

- Two CNC automatic bending machines
- Compressed air that is supported by 3 compressors
- Central welding with distributors
- Portable tubes expanders
- Special construction machinery for pipes with blade
- Two truck crane
- Over 20 sets of equipment repair workshop with a full range

tools, welding, and special tools for repairs

Tube welding high quality automatic machines



Figure 17: General view from our facilities

## 16. CLIENTS

We have more than 100 clients worldwide. Below is a sample of our Major clients:

## **INDUSTRIAL& MARINE CLIENTS LIST**

- Greek Shipyards
- Greek Aerospace Industry
- GREEK POWER STATIONS
- ❖ GREEK OIL REFINERIES (Hellenic Petroleum, MOTOR OIL, PETROLA)
- ❖ SENOKO POWER PLANT SINGAPORE
- **❖** TUAS CHINA POWER PLANT
- ❖ CAOJING.BASF.SHANGHAI CHINA PLANT
- ❖ NATIONAL PETROLEUM GAS SEPARATOR PLANTS IN LYBIA
- ❖ Bazan Group- Oil refineries Ltd, Haifa, Israel
- ❖ GEMAK SHIPYARD TURKEY
- **❖** ICL GROUP



Figure 18: Waste heat boiler panels of chemical plant

## List of foreign shipping companies:

- ❖ CELEBRITY CRUISES USA / ROYAL CARIBBEAN CRUISES (RCCL)
- **❖** ZODIAC LONDON
- **\*** TANKER PACIFIC SINGAPORE
- **❖** WALLEM
- **❖** WILHELMSEN
- OMNI OFFSHORE
- CMA HONG KONG
- CMA UK
- CMA GERMANY
- **❖** PULLMANTUR
- CMA CGM
- **❖** SEACHANGE
- **❖** LSC SHIPMANAGEMENT
- ❖ NAVIGATION MARITIME BULGARE
- **A** EASTERN PACIFIC
- ❖ V SHIPS
- ❖ NAVIGAZIONE MONTANARI
- **❖** GNMTC
- **❖** MARLOW



- **♦** LOMAR
- TUI CRUISES And more

## Sample of Greek Companies:

- OSG
- **ATLANTIC BULK CARRIERS**
- **❖** ARCADIA SHIPMANAGEMENT
- ❖ PRIME TANKERS MANAGEMENT
- **EUROBULK**
- **UROPEAN PRODUCT CARRIERS**
- ❖ FREE BULKERS
- **❖** ELETSON CORPORATION
- ❖ ANEK
- **\*** TSAKOS
- HELLENIC SEAWAYS
- ❖ MARAN
- ♣ AVIN
- **A** DANAOS SHIPPING
- STEALTH MARITIME CORP. And more

# **ORGANIZATION CHART MANAGEMENT**

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---- Website: www.mbrltd.gr



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# NICK SOUVLERIS- MANAGING DIRECTOR by owners' appointment

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**Koufalexis Dimitrios: Secretarial** 

to Director

#### **Efi Souvleris**

Share Holder & auditor

## **Dimitra Souvleris**

Share Holder & auditor

# Aspropyrgos/Greece FABRICATION FACILITIES & second office

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- ASSURANCE & QUALITY CONTROL Departments
- MANUFACTURE & WORKSHOP Departments

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**Dimitra Souvleris** 



## Share Holder & auditor

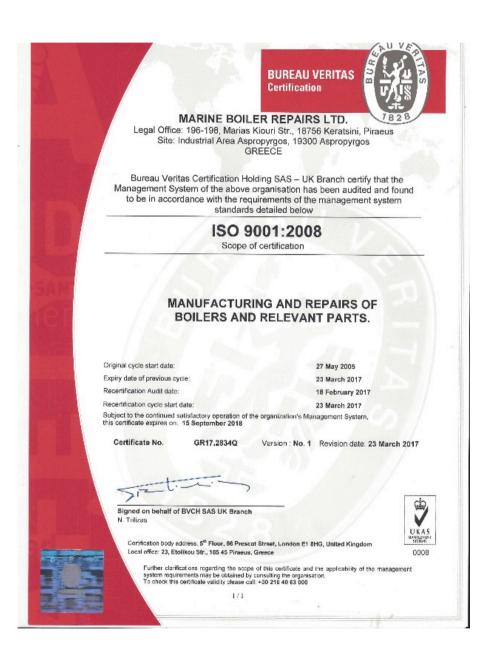
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## SAMPLE OF ASSURANCE CERTIFICATIONS AND APPROVALS





## SECOND LIST OF FABRICATED MATERIALS

## EGE SQUARE & SPIRAL EGE MATERIALS PIPES AND PANELS









Figure 19: Panels ready for dispatch



Figure 20: EGB panels



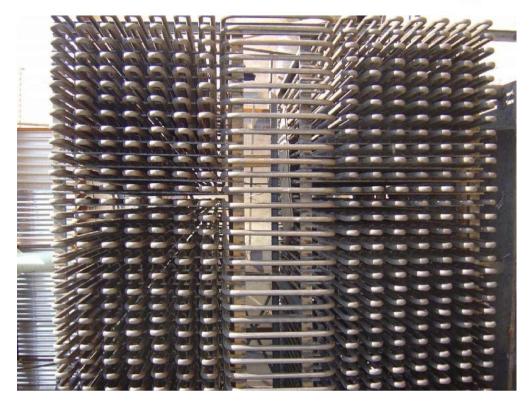


Figure 21: Panels, photo from MBR Workshop at Greece



Figure 22: Loading the materials, ready to be dispatched



Figure 23: Coils



Figure 24: Materials, MBR Workshop at Greece



Figure 25: Operator





Figure 26: Coils ready for dispatch and installation