

Date : 3/6/2014  
Protocol nr.: ...

## CERTIFICATION

We hereby certify that the company **ET.M.ER. S.A.**, undertook and executed as a Contractor, on behalf of **MOTOR OIL (HELLAS) Corinth Refineries S.A.** the following project :  
**"REVAMP AND MAINTENANCE WORKS ON GASOLINE UNITS 1500/5300/2100/2200/2500 AND REFU-6513 ON U-1300/1500/5300/2100/2200/2300/2500 "**

**Contract Nr.** : 2401821 & 7100649  
**Project budget** : 3.001.067.78€  
**Completion date** : 21/06/2013  
**Final cost** : 2.573.215,10€  
**Description of works** : The project was executed at the Motor Oil Refinery (Hellas) in Corinth during the T/A of 2013 and included the following works:

a. Maintenance works of the equipment of units U-1500/ 5300/ 2100/ 2200/ 2500

- Units and equipment blinding and de-blinding after the end of the works
- Opening of equipment for internal and external inspection: towers, reactors, tanks, filters, furnaces
- Internal repairs resulting from the inspection: repairs to the shells, repairs or replacement of trays, replacement of packing, replacement of tubes, supports, repair of mirrors in the furnaces, replacement of refractories.
- External repairs resulting from the inspection: repair or replacement of furnace burners, placement of double plating (pads), replacement of equipment sheets, replacement of nozzles of various diameters (tower, furnaces etc.)
- Replacement of catalyst under the supervision of inspectors in reactors R 2202/3/4, R 2251 and regenerator R 2271
- Heat exchangers – air coolers  
Opening, removal or replacement of bundles, repairs if required, replacement of 7 air cooler bundles, hydraulic tests, restoration

Maintenance works were carried out in 8 towers, 10 reactors, 48 tanks, 5 filters, 10 furnaces, 71 alternators, 30 air coolers.

b. Piping networks

- Piping works in unit maintenance and new product and utilities networks
- Prefabrication and erection at the turn-around of piping networks of products and utilities, partial replacements of lines, installation of new

lines

- Replacement of safety valves on towers – tanks – reactors including input-output lines
- Pipes diameter: 1/2" ÷ 36", thickness up to 16mm, c.s. materials, alloy steel, stainless steel

Total of inches: 18,350

Hydraulic tests of piping networks and equipment: 20 bar ÷ 180 bar.

c. Replacement of valves of all types from 1" ÷ 24". Total items: 210.

85% of the works were carried out during the T/A.

All materials and the equipment were supplied by the owner except the metal profiles for the construction of supports.

Total duration of the activities: 3 months & Turn around 18 days

The executed works, as they have been invoiced till to 4/10/2013, amounted to: 2.573.215,10€ V.A.T excluded.

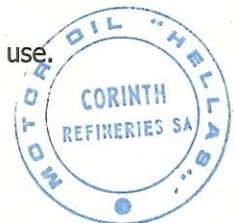
The above mentioned works breakdown as follows:

YEAR	CATEGORY	VALUE
2013	INDUSTRIAL / ENERGY	2.074.750,10 €
	HI-PRESSURE HYDRAULIC SYSTEMS	498.465,00 €

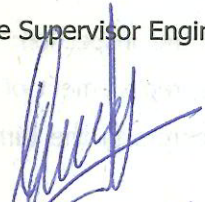
The execution of the project was utterly satisfying and promptly delivered.

This certificate was granted to the a.m. company after its request and for any lawful use.

**On behalf of  
MOTOR OIL(HELLAS)  
Corinth Refineries S.A.**



The Supervisor Engineer

  
Pantelis Theodoropoulos  
N. Tee: 101411

The Lawful Representative

