**Supply of New Shell and Transition Piece for the Light Gas / Oil Heater 3-101**

**Client/End User**: Hellenic Petroleum s.a. _ Elefsis Refinery (Greece)

**Year**: 2008

**Work Description**:

Furnace shell design and mechanical calculations (I.D. 4390mm, L=15012 end-to-end).
Mechanical calculations of radiant coil.
Procurement of materials for furnace shell and coil.
Plates cutting, rolling.
Assembly of shell plates and bottom-welding of furnace shell.
Radiant coil manufacturing, in two pieces -transportable sizes-.
N.D.T.’s 100% X-ray.
Hydrotest of prefabricated sections.
Burners openings and flanges manufacturing.
Nozzles manufacturing.
Manufacturing-installation of observation and access doors.
Installation of castable pipe supports (manufactured by others) and of insulation anchors.
Sandblasting-painting.
Insulation installation.
Transportation to site.
Bottom insulation and muffle blocks (provided by client) installation, after erection on furnace final position.

Convection module design from client drawings (4264x2140x2174mm).
Material procurement.
Beams and plates cutting-assembly-welding.
Manufacture of end tube sheets.
Prefabrication of hairpins of convection coil.
Sandblasting-painting of frame.
Header box manufacture.
Anchors installation.
Sandblasting-painting.
Installation of refractory.
Tubes installation-welding.
NDT’s performance (100%X-Ray).
Hydrotest of coil.
Mounting of header boxes.
Packing of convection box.
Transportation at site.
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