EKME MECHANICAL ENGINEERING & CONSTRUCTION CONTRACTORS

'34-R-001 & 002 REACTORS - HYDROCRACKER UNIT _ ELEFSIS UPGRADING PROJECT'

Client/End User : Hellenic Petroleum S.A. _ Elefsis Refinery

Year : 2009

Work Description :

Performance of mechanical calculations. Issue of construction drawings in Autocad.
Supply of materials.
Reactors manufacturing/welding.
PWHT of the reactors.
Performance of all N.D.T.'s.
Sandblasting-painting of the reactors externally.
Supply of all internals for the two reactors.
Transport of the two reactors to Hel.Pe. Elefsis complex.
CE marking according to PED 97/23/EC.
Delivery of Inspection Book along with the reactors.

Reactors' Data:

Item :	34-R-001 _ Reactor	34-R-002 _ Reactor
Content :	Hydrocarbons / H2	
Position :	Vertical	
TL – TL (m):	5,5	20,2
Internal Diameter (m) :	2,4	2,6
Weight (tns) :	51	170
Capacity (m^3) :	32,1	116.45
Design Code :	ASME VIII Div. 1, PED 97/23/EC, FEA Analysis, API 934	
Design Pressure (bar (g)) :	86.3/F.V.	80.42/F.V.
Design Temperature (°C) :	400/177	420/177
Corrosion Allowance :	5 mm	0 (internal clad 3mm)
Joint Efficiency :	1	1
PWHT :	@ 690°C for 6 hours	
Shell Material :	SA387 Gr 22 Cl 2 _ 87mm	SA 387 Gr 22 Cl 2 + Clad Tp 347_ (84+3)mm
Heads Material :	SA387 Gr 22 Cl 2 _ 46mm	SA 387 Gr 22 Cl 2 + Clad Tp 347_ (50+3)mm
Nozzles Material :	SA 182 F 22 Cl 3, 900#	SA 182 F 22 Cl 3 + W.O. Tp 347_3mm, 900#
Skirt Material :	SA 387 Gr 22 Cl 2 / SA 516 Gr 70	SA 387 Gr 22 Cl 2 / SA 516 Gr 70
Internal Supports :	Built Up Rings _ 2.25Cr-1Mo	Built Up Rings _ 2.25Cr-1Mo + W.O. ER347_3mm
Third Party Inspection :	Moody S.A.	

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