


**Indian Oil Corporation Ltd.  
PARADIP Refinery**
**Technical Specification for Natural Gas  
Firing in GTs**
**General Instruction to Bidder**

Bidder shall provide details of all modification to be done for Natural Gas firing in GTs during detailed engineering.

Paradip Refinery desires to have a safe, reliable and efficient natural Gas firing system that shall be supplied and commissioned to give unattended trouble-free operation.

**4.0 DESIGN BASIS:-**
**a. Natural Gas composition:**

	Case-1	Case-2
Component	MOLE%	MOLE%
C1	94.63	91.5
C2	1.31	2.5
C3	1.46	2.5
I-C4	0.33	0.5
n-C4	0.4	0.5
I-C5	0.2	0.2
n-C5	0.1	0.1
C6+	0.3	0.3
N2	0.34	0.7
CO2	0.27	0.7
H2S PPM	10	10

**b. Natural Gas B/L Condition:**

Pressure, kg/cm <sup>2</sup> g	Min – 40.0, Normal- 45.0
Temperature, degC	Min- 15.0, Normal- 30.0
Piping spec at B/L	12" line size MoC B1AP

**5.0 Codes, Regulations and Materials**

All the pressure parts(As applicable) described in this proposal will be designed and manufactured as per the latest applicable IBR and the pressure part materials envisaged will be in accordance with ASTM Standards.

The structural steel will be designed as per IS:800 taking into consideration a Seismic Coefficient as per IS:1893 (latest edition) and wind load as per IS 875 (latest edition) and manufactured as per AWS D 1.1. All structural steel material will be as per IS:2062 specifications.