



SITE & UTILITY DATA

PROJECT : Installation of New GTC Compressor at Gandhar,
Gujarat,

OWNER : Gas Authority of India Limited

PMC : Engineers India Limited

JOB NO. : B240

A	16.04.19	ISSUED FOR COMMENTS	AS	NK	NK
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

1.0 SITE DATA INFORMATION

Site Location

• Plant Location	:	Gas Processing Unit, Gandhar
• State	:	Gujarat
• Nearest Important Town	:	Bharuch
• Nearest Railway station	:	Jambusar
• Nearest Port	:	Dahej
• Nearest Airport	:	Bhavnagar
• Nearest National Highway	:	NH-228
• Source of Water	:	Narmada River (through pipeline)
• Rainy Season	:	June to October
• Annual Rainfall	:	

2.0 METEOROLOGICAL DESIGN DATA:

Sl#	Parameter	Minimum	Normal / Average	Maximum / Design
(A) METEOROLOGICAL DATA				
1	Elevation above mean sea level, m		8	
2	Barometric pressure, mBar			
3	Ambient temperature, °C	t _{min} = 6	t _{nor} =	t _{max} = 47
4	Relative humidity, %	20% @ t _{min}	@ t _{nor}	90% @ t _{max}
5	Rainfall data for 24-hour period			305 mm
6	Wind data (a) wind velocity			160 km/hr
	(b) wind direction (% days per year)	N(5), NE(13.5), E(5.75), SE(10.25), S(10), SW (37.5), W(6), NW(9), Calm(3)		
(B) DATA FOR EQUIPMENT DESIGN				
1	Design dry bulb temperature, °C			42
2	Design wet bulb temperature, °C			29
3	Low ambient temperature for MDMT, °C			6
4	Design air temperature for air cooled exchangers where followed by water cooling, °C			40
5	Design air temperature for air cooled exchangers Where not followed by water cooling, °C			42
6	Coincident temperature and relative humidity for Air Blower / Air Compressor design.			40 °C & RH 90%

3.0 UTILITY SPECIFICATIONS:

Sl. No.	Parameter	Minimum	Normal	Maximum	Mech. Design
1	HIGH PRESSURE FUEL GAS				
	Pressure, kg/cm ² g	-	27.0	-	31.0
	Temperature, °C	-	40-45	-	65
2	LOW PRESSURE FUEL GAS				
	Pressure, kg/cm ² g	-	4.0	-	15.0
	Temperature, °C	-	40-45	-	65
3	LOW PRESSURE (LP) STEAM				
	Pressure, kg/cm ² g	4.5	5.0	6.0	8.0
	Temperature, °C	155	160	195	240
4	SERVICE WATER				
	Pressure, kg/cm ² g	-	2.5	-	9.5
	Temperature, °C	-	AMB	-	65
5	COOLING WATER				
	Supply Pressure, kg/cm ² g	3.5	4.0	4.5	7.5
	Return Pressure, kg/cm ² g	2.5	-	-	7.5
	Supply Temperature, °C	-	33	-	65
	Return Temperature, °C (Max)	-	43	45	65
6	PLANT AIR				
	Pressure, kg/cm ² g	4.5	6.5	7.0	9.5
	Temperature, °C	-	AMB	-	65
7	INSTRUMENT AIR				
	Pressure, kg/cm ² g	4.5	6.0	6.5	9.5
	Temperature, °C	-	AMB	-	65
8	NITROGEN				
	Pressure, kg/cm ² g	3.0	4.0	-	9.5
	Temperature, °C	-	40	-	65

Notes:

- Utility conditions mentioned above are at unit battery limits.
- All battery limit pressures are measured at grade.

4.0 PLANT & INSTRUMENT AIR QUALITY:

Sl. No.	Parameter	Plant Air	Instrument Air
1	Dew Point at atmospheric pressure	No free moisture	(-) 40 Deg. C
2	Oil Content, ppm	Nil	Nil

5.0 NITROGEN GAS QUALITY:

Sl	Parameter	Nitrogen
1	Dew Point at atmospheric pressure	(-) 40 Deg. C
2	Oil Content, ppm	Nil
3	Nitrogen purity, vol%	99.5% vol% (min.)
4	Oxygen content, vol ppm (max)	0.5vol% (max.)

6.0 FLARE HEADER PRESSURE:

Maximum Flare Backpressure at the Pressure Relief devices shall be considered as 5.0332 kg/cm²A.

7.0 INTERFACE POINTS

The Purchaser's interface for Process Fluid and utilities such as electrical power, instrumentation and control power, cooling water/service water, instrument and Plant air, inert gas etc. shall be as described below:

- (a). All Auxiliary Piping within the skid is in equipment manufacturer's scope.
- (b). Utilities shall be made available at Pressure and temperature values as per above. Any hardware for pressure reduction and flow regulation, if required, shall be in vendor's scope. Purchaser shall terminate piping at the edge of skid/base-plate as single inlet point and single outlet point. Further distribution within the skid shall be by vendor.
- (c). Electrical & Instrumentation Power termination points shall be as per respective datasheets and specification.
- (d). Vent & Drain Piping shall be terminated by the vendor at the edge of the skid/base-plate along with isolation valves & flanged piping.