


 <div>中海油石化工程有限公司 CNOOC Petrochemical Engineering Co., Ltd.</div>	DATA SHEET FOR INSTRUMENT AIR PACKAGE(Y-285321) OF FQN	Owner Doc.No.		CMIT-240048-728-PCS-15.17-1001		
		Job's Doc. No.		253001D0728TE01D19-1		
		Phase		Detailed Design		
		Rev.		B	Page 1 of 5	
Company:  CNOOC IRAQ LIMITED						
Project: FQN NEW DEGASSING STATION UPGRADING PROJECT						
Unit: FQN DEGASSING STATION						
Contract No.: CMIT-PRT-10.53-240048						
<div>Discipline: PCS</div> <div>Prepared by: Yu H.L.</div> <div>Checked by: Li Ch.Q.</div> <div>Approved by: Liu Ming</div>						
B	ISSUED FOR APPROVAL	Yu.H.L	Li.CH.Q	Liu.ming		20250721
A	ISSUED FOR REVIEW	Yu.H.L	Li.CH.Q	Liu.ming		20250618
Rev.	Description	Prepared	Checked	Approved		Date

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APPLICABLE TO: <input type="radio"/> PROPOSAL <input checked="" type="radio"/> PURCHASE <input type="radio"/> AS-BUILT	JOB	FQN NEW DEGASSING STATION UPGRADING PROJECT		CLIENT		CNOOC IRAQ LIMITED	
	LOCATION	IRAQ		QUANTITY		1	
	UNIT	728		MANUFACTURER			
1 SITE CONDITIONS AND GENERAL DATA							
AMBIENT TEMPERATURE (°C)				Max.: 55		Min.: -5	
RELATIVE HUMIDITY (%)				Max.: 80		Min.: 25	
ATMOSPHERIC PRESSURE (kPa)				Max.:102		Min.:98	
AREA CLASSIFICATION				SAFE AREA			
NOISE LIMITATION				≤85 [dB(A)]			
ALTITUDE				4~24 m ASL			
INSTALLATION				OUTDOOR		UNDER SHED	
COATING SYSTEM				AS MANUFACTURER'S STANDARD			
2 WEIGHTS AND SPACE REQUIREMENTS							
EMPTY WEIGHT (Kg)		VTA		SHIPPING WEIGHTS (Kg)		VTA	
OPERATING WEIGHT (Kg)		VTA		APPROXIMATE SPACE (L x W x H)		VTA	
3 TESTING REQUIREMENTS							
		REQ'D		WITNESS			
PERFORMANCE		YES		YES			
MECHANICAL RUN TEST		YES		YES			
COMPLETE UNIT TEST		YES		YES			
HYDROSTATIC TEST		YES		NO			
NOISE TEST		YES		NO			
TAG NO		C-285322A/B		SERVICE		AIR COMPRESSOR	
						QUANTITY	
						2	
1 CODE, REGULATIONS AND SPECIFICATIONS							
CODES AND REGULATIONS		API 619		OFFICIAL LANGUAGE		ENGLISH	
GENERAL SPECIFICATIONS		CMIT-240048-728-ROT-15.03-0003		SPECIAL SPECIFICATION			
2 OPERATING CONDITIONS							
OPERATING CASE			NORMAL		MAXIMUM		REMARK
STAGE							
FLOW		Nm³/h	750 (VTC)		VTA		NOTE 6
SUCTION	PRESSURE	MPa abs	ATM				
	TEMPERATURE	°C	AMB				
	MOLECULAR WEIGHT	—	29				
	Cp/Cv RATIO(comp)		1.4				
	COMPRESSIBILITY FACTOR		1				
	OIL CONTENT	ppm	≤3				
	VISCOSITY	cp	0.0195				
DISCHARGE	PRESSURE	MPa G	0.9		1.0		DESIGN PRESSURE:1.2MPaG
	TEMPERATURE	°C	AMB+10				DESIGN TEMPERATURE:85°C
	COMPRESSIBILITY FACTOR		1				
	DESIGN LIFE		years	25			
3 SCOPE OF SUPPLY							
COMPRESSOR TYPE		OIL-FLOODED - SCREW		OIL SEPARATOR		YES	
DRIVER TYPE		ELECTRIC MOTOR		AUTO-CONDENSATE TRAP		YES	
COUPLING / GUARD		YES		AIR DRIER (S)		NO	
BASEPLATE		YES		BLOW OFF SILENCER		NO	
INTAKE FILTER		YES		CONTROL PANEL		YES	
INTERCOOLER		NO		VIBRATION MONITOR		YES	
AFTERCOOLER		YES		INTER CONNECTING PIPE WORK AND VALVES		YES	
AIR RECEIVER		NO		ACOUSTIC ENCLOSURE		YES	
PRE-FILTER		NO		FOUNDATION BOLTS		YES	
AFTER-FILTER		NO		MOISTURE SEPARATOR		YES	
OIL-FILTER		YES		RELIEF VALVE		YES	

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<b>4 MATERIALS</b>			
CASING	VTA		
ROTOR (SHAFT)	VTA		
SEAL	VTA		
BEARING	VTA		
BASE-PLATE/STRUCTURAL	A36		

<b>5 UTILITY SUPPLY DATA</b>			
ELECTRICAL SUPPLY (Voltage/Frequency/Nos of Phases)	400V-50Hz-3phases		
RATED POWER (kW)	90 (VTC)		
COOLING TYPE	AIR-COOLING		
COOLING AIR FLOW (m³/h)	VTA		


<b>6 INSTRUMENTATIONS</b>			
FUNCTION	INDICATOR	ALARM	S / D
DISCH. PRESS.	YES	YES	YES
1/ STAGE PRESS.	NO	NO	NO
LUBE OIL PRESS.	YES	YES	YES
DISCH. TEMP.	YES	YES	YES
1/ STAGE TEMP.	YES	YES	YES
LUBE OIL TEMP.	YES	YES	YES
COOLANT. TEMP.	NO	NO	NO
LUBE OIL LEVEL	NO	NO	NO
VIBRATION	YES	YES	NO
REMOTE S/D	YES		
LOCAL PANEL	YES		
DIFFERENTIAL PRESSURE GAUGE	NO		


  

**NOTES:**

VTC: Vendor to confirm; VTA: Vendor to advise.

- Design pressure shall be determined by the air compressor manufacturer (vendor).
- Design temperature of air supply system is 85℃, vendor shall supply cooling system and temperature trip as required.
- Vendor shall supply all necessary items to generate compressed air at the required conditions such as silencer, filter, inter cooler, moisture/oil separator, control system etc.
- Two air compressors and all other accessories shall be mounted to a skid (with container).
- For scope of supply of this skid, refer to P&ID CMIT-240048-728-PCS-15.11-1001 .For general air compression system arrangement, refer to equipment layout drawing CMIT-240048-728-PCS-15.01-1001.
- Indicated Capacity at the Package Battery Limit. Vendor shall size the air compressor for required IA capacity accordingly.
- Driver shall be suitable for continuous operation at compressor rated power at the given site conditions and voltage fluctuation range.
- Vendor shall provide P&ID, Data Sheet, Calculation, General Arrangement, Erection/Installation Instruction, Spare-Parts List, Operating manual, Testing Certificates, etc. for EPC contractor approval.
- The interconnecting piping, piping supports and cable trays, etc. shall be prefabricated on vendor's shop. The welding work is not permitted at site.The detail materials of piping system and valves shall comply with CMIT-240048-728-PIP-15.03-3001 \_A\_ SPECIFICATION FOR PROCESS PIPING MATERIALS, CMIT-240048-728-PIP-15.03- 3002\_ SPECIFICATION FOR MANUAL VALVES.All piping systemwelding and NDT shall comply with CMIT-240048-728-EQP-15.03-0001\_A\_ SPECIFICATION FOR PIPING AND PIPELINE WELDING IN NON-SOUR SERVICE.
- Transport medium: air; Flow regulation range: 40%~110%。

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APPLICABLE TO: <input type="radio"/> PROPOSAL <input checked="" type="radio"/> PURCHASE <input type="radio"/> AS-BUILT	JOB	FQN NEW DEGASSING STATION UPGRADING PROJECT		CLIENT	CNOOC IRAQ LIMITED	
	LOCATION	IRAQ		QUANTITY	1	
	UNIT	728		MANUFACTURER		
1 SITE CONDITIONS AND GENERAL DATA						
AMBIENT TEMPERATURE (°C)		Max.: 55		Min.: -5		
RELATIVE HUMIDITY (%)		Max.: 80		Min.: 25		
ATMOSPHERIC PRESSURE (kPa)		Max.:102		Min.:98		
AREA CLASSIFICATION		SAFE AREA				
NOISE LIMITATION		≤85 [dB(A)]				
ALTITUDE		4~24 m ASL				
INSTALLATION		INDOOR		UNDER SHED		
COATING SYSTEM		AS MANUFACTURER'S STANDARD				
2 WEIGHTS AND SPACE REQUIREMENTS						
EMPTY WEIGHT (Kg)		VTA	SHIPPING WEIGHTS (Kg)		VTA	
OPERATING WEIGHT (Kg)		VTA	APPROXIMATE SPACE (L x W x H)		VTA	
3 TESTING REQUIREMENTS						
	REQ'D		WITNESS			
PERFORMANCE	YES		YES			
MECHANICAL RUN TEST	YES		YES			
COMPLETE UNIT TEST	YES		YES			
HYDROSTATIC TEST	YES		NO			
NOISE TEST	YES		NO			
TAG NO		E-285322A/B	SERVICE	PRE-COOLER	QUANTITY	2
1 CODE, REGULATIONS AND SPECIFICATIONS						
CODES AND REGULATIONS		MANUFACTURER'S STANDARD		OFFICIAL LANGUAGE	ENGLISH	
GENERAL SPECIFICATIONS				SPECIAL SPECIFICATION		
2 OPERATING CONDITIONS						
1	PRESSURE	MPag	0.9			
2	INLET TEMPERATURE MIN/MAX	°C	15/65			
3	FLOW NORMAL/DESIGN	Nm³/h	VTA			
4	OUTLET TEMPERATURE	°C	≤40			
3 PERFORMANCE DATA						
1	PRESSURE DROP (allowed/calculated)	kPa	30/15 (VTC)			
2	DESIGN PRESSURE	MPag	1.2			
3	DESIGN TEMPERATURE	°C	85			
4	INSTALLED ELECTRICAL DUTY	kW	10 (VTC)			
5	ELECTRICAL SUPPLY (Voltage/Frequency/Nos of Phases)	V/Hz/-	400/50/3			
6	CONDENSING COOLING FLUID	-	Air			
7	REFRIGERANT TYPE	-	VTA			
8	COMPRESSOR TYPE	-	VTA			
9	NOISE LIMITATION (1 m free field )	dBA	≤70			
10	NUMBER OF HEAT EXCHANGERS	-	1			
11	DESIGN LIFE	years	25			

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TAG NO		DRY-285322A/B		SERVICE		INSTRUMENT AIR DRYER (Desiccant dryer)		QUANTITY		2	
1 CODE, REGULATIONS AND SPECIFICATIONS											
CODES AND REGULATIONS			ASME VIII DIV. 1			OFFICIAL LANGUAGE			ENGLISH		
GENERAL SPECIFICATIONS						SPECIAL SPECIFICATION					
2 OPERATING CONDITIONS											
1 CHARACTERISTICS OF WET AIR(INLET)											
2 PRESSURE				MPag				0.9			
3 TEMPERATURE MIN/MAX				°C				5/40			
4 FLOW NORMAL/DESIGN				Nm³/h				VTA			
5 CHARACTERISTICS OF DRY AIR(OUTLET)											
6 FLOW NORMAL/DESIGN				Nm³/h				210/420			
7 PRESSURE				MPag				0.8			
8 TEMPERATURE MIN/MAX				°C				40			
9 DEW POINT				°C				-20°C (at 0.8MPag)			
3 DRYER CHARACTERISTICS											
1 REGENERATION TYPE				<input checked="" type="checkbox"/> HEATLESS REGENERATION <input type="checkbox"/> HEAT REGENERATION <input type="checkbox"/> OTHER							
2 INLET FILTRATION				<input checked="" type="checkbox"/> OIL (2) <input type="checkbox"/> LIQUID <input type="checkbox"/> DUST							
3 NUMBER OF INLET FILTERS AND CAPACITY		-						1*100%			
4 OUTLET FILTRATION (dust)		µm						<3, <1mg/m³			
5 NUMBER OF OUTLET FILTERS AND CAPACITY		-						1*100%			
6 OUTLET OIL CONCENTRATION		ppm						<1			
7 OVERALL PACKAGE PRESSURE DROP (allowed/calculated)		kPa						50/30 (VTC)			
8 DESIGN PRESSURE		MPag						1.2			
9 DESIGN TEMPERATURE		°C						85			
10 MATERIAL/CORROSION ALLOWANCE		- /mm						SA 516 Gr.60/3			
11 CYCLE DURATION (Adsorption + Desorption)		min						≥10 (VTC)			
12 REGENERATION AIR CONSUMPTION NORMAL / DESIGN		%						≤20 (VTC)			
13 ELECTRICAL SUPPLY (Voltage/Frequency/Nos of Phases)		V/ Hz/-						400/50/3			
14 INSTALLED ELECTRICAL DUTY		kW						1 (VTC)			
15 ADSORBATE CHARACTERISTICS		-						ACTIVATED ALUMINA			
16 VOLUME		m³						VTA			
17 DESIGN LIFE		years						25.0			
NOTES:											
VTC: Vendor to confirm; VTA: Vendor to advise. 1 Two Pre-coolers, two instrument air dryers and all other accessories shall be mounted to a skid (with container). 2 For scope of supply of this skid, refer to P&ID CMIT-240048-728-PCS-15.11-1002 .For general air compression system arrangement, refer to equipment layout drawing CMIT-240048-728-PCS-15.01-1001. 3 Vendor shall provide option for auto dew-point control to optimise bed regeneration times. 4 A facility to switch off auto change-over to manual change-over shall be provided. 5 One of the unit will be on the Emergency Power. In case of electrical failure, dew point requirement do not have to be met, but flow through dryers shall not be restricted. 6 Vendor shall provide P&ID, Data Sheet, Caculation, General Arrangement, Erection/Installation Instruction, Spare-Parts List, Operating manual, Vessels Testing Certificates, etc. for EPC contractor approval. 7 The interconnecting piping, piping supports and cable trays, etc. shall be prefabricated on vendor's shop. The welding work is not permitted at site.The detail materials of piping system and valves shall comply with CMIT-240048-728-PIP-15.03-3001_A_SPECIFICATION FOR PROCESS PIPING MATERIALS, CMIT-240048-728-PIP-15.03- 3002_SPECIFICATION FOR MANUAL VALVES.All piping systemwelding and NDT shall comply with CMIT-240048-728-EQP-15.03-0001_A_SPECIFICATION FOR PIPING AND PIPELINE WELDING IN NON-SOUR SERVICE.											