

**OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT, ISLAMABAD
FOREIGN SECTION C**

(To be completed, filled in, signed and stamped by the principal)

ANNEXURE 'A'

Material SUPPLY & COMMISSIONING OF SKID MOUNTED INSTRUMENT AIR DRYER FOR KPD-TAY PLANT.
Tender Enquiry No PROC-FC/CB/P&P/KPD-4413/2019
Due Date
Evaluation Criteria FULL

SCHEDULE OF REQUIREMENT

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	Supply of Skid Mounted Instrument Air Dryer with independent control system with Dust removal, Pre and after filter for (Oil injected air compressor) as per attached TOR .	Number	1					
2	Commissioning & Performance Testing as per TOR	Number	1					

Note: Bidders are advised that Payment will be made as per the Foreign Procurement Payment Terms available at OGDCL Website (Tenders Tab) effective from February 27, 2018.

Note:

- 1) PURSUANT TO TENDER CLAUSE # 2.2, 11.4, 13 & 35.3.2, BID BOND AMOUNTING TO EURO 720/- OR EQUIVALENT TO PAK RUPEES MUST BE SUBMITTED WITH THE TECHNICAL BID AND VALID FOR 150 DAYS FROM THE DATE OF OPENING OF THE BID.
- 2) **TOR:** ATTACHED TOR IS INTEGRAL PART OF SOR.
- 3) **EVALUATION CRITERIA:** FULL CONSIGNMENT WISE ON CFR BY SEA KARACHI BASIS.
- 4) **TERMS AND CONDITIONS:** BIDDER IS ADVISED TO CAREFULLY READ ALL THE TERMS AND CONDITIONS OF THE TENDER DOCUMENT AVAILABLE AT OGDCL WEBSITE IN THE MASTER TENDER DOCUMENT.

vetted
Faisal
FATMAL RAFIQ
Sr. In-charge (Inst.)
P&P-Quat-B
Ext-2788



OIL AND GAS DEVELOPMENT COMPANY LIMITED

KPD-TAY GAS & LPG PROCESSING PLANT

**SCOPE OF SUPPLY, INSTALLATION
SUPERVISION & COMMISSIONING FOR
INSTRUMENT AIR DRYER**

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1 INTRODUCTION

Oil and Gas Development Company Ltd (OGDCL) is Pakistan's National Oil & Gas Exploration and Production Company. OGDCL is currently operating Country's largest Oil & Gas sector including saleable Oil & Gas Processing Plants.

KPD-TAY Integrated Development Project Phase-II is a Gas & LPG Processing Plant, located in Hyderabad District about 25 km away from Hyderabad and approx 195 km from Karachi, Sindh Province of Pakistan. The plant is comprised of two gas processing trains installed in the close proximity of Oil wells. The processing plant is connected with the wells through gas gathering network which terminates into slug catcher at the process plant premises.



Figure 1: Location of the Plant

OGDCL intends to engage services of experienced Company for the design and supply of Instrument Air Dryer to be installed at KPD-TAY Gas & LPG Processing Plant.

2 INSTRUMENT AIR DRYER DESIGN AND SUPPLY SCOPE

Currently we have 04 Nos. of Instrument air compressors with a one dryer set. We want to procure 01 No. Instrument air dryer set. After its supply at site civil works & Piping interconnections shall be done by OGDCL whereas commissioning of the supplied I/A Dryer shall be the responsibility of the supplier.

ITEM/JOB DESCRIPTION	QTY
Skid Mounted Instrument Air Dryer c/w Dust removal, Pre and Post filter (for Oil injected air compressor) and independent control system.	01 Set
<i>Detailed specifications and requirement mentioned in Section-3.0, Section-4.0 and Section-7.0</i>	
Commissioning of the dryer, SAT & 72 Hrs. Performance test at Site	01 Job

3 SPECIFICATIONS

Detailed specification of all the required items are mentioned below

3.1 Air Dryer Package

Skid mounted, Twin tower absorption (Desiccant) dryer for Moisture Removal from Compressed Air by Adsorption is required for Moisture Removal from Instrument Air. It should be completely wired, equipped

INSTRUMENT AIR DRYER SUPPLY SCOPE OF WORK

with interconnecting pipe work fittings and ready to operate. The unit should be mounted on industrial type steel base frame capable of being placed on flat and horizontal floor; the frame should comprise of lifting slots and holes for fixing the frame to floor.

a.	Two Vessels comprising of regenerative type desiccant
b.	Dust Removal Pre-Filter and Post-Filter (for Oil injected Air Compressor)
c.	All Interconnect Piping and Fittings with Valves (as per Manufacturer Standard Design)
d.	Necessary Instrumentation for monitoring and control of Dryer (as per Manufacturer Standard Design)
e.	Independent Smart Monitoring & Control System with HMI

Two (2) Vessels with each vessel comprising of a bed of regenerative type desiccant with details as per below datasheet should form part of offered dryer. Each vessel must have design pressure of at least 9 bar (g); additionally the vessels should conform to EN13445.

All the interconnect piping along with Pneumatic Actuated Valves (with required accessories) as well as manual valves, check valves for maintaining operation of Dryer should come mounted on the Dryer assembly; pilot air filter for clean air provision for Pneumatic Actuated valves should be provided. In order to reduce the noise during pressure release and regeneration in accordance with required noise limit, if silencer is required, it should also be offered.

Necessary instruments (Pressure Transmitters, Temperature Transmitters, Pressure Gauges, and Dew Point Sensor etc.) to maintain operation of Dryer should form part of supplied Dryer. The Dew Point Sensor with integrated dust filter for measurement of Air Dew Point and optimizing/adjusting operational cycles of dryer accordingly should be included.

Should be equipped with independent smart monitoring & control system mounted in local Electrical cubical (IP54 conforming IEC) with local HMI showing the dew point of the instrument air and other operational parameters of both beds of the dryer. Sequence of operation for adsorption / regeneration should have both options, i.e. dew point & timer. The Control System should be able to start/stop dryer locally, via wired remote switch or LAN; the necessary electrical components, Alarm Contacts, Remote Emergency Stop inputs, terminal connections for wiring should be part of controller.

Pre Filter & post filter should both be equipped with standard differential gauge showing the performance of the filters.

DATA SHEET FOR DRYER		
1	Tag No.	PU-8603
2	Area of Unit	F86
3	Equipment Name	Dryer
4	Number of Dryer Vessel	02
5	IP Protection	IP 65 Protected
AIR DRYER PRE FILTER		
1	Capacity	943 SCFM
2	Degreasing	0.1mg/m ³
3	De-dusting	1µm

AIR DRYER POST FILTER		
1	Capacity	943 SCFM
2	Degreasing	0.01mg/m ³
3	De-dusting	0.01µm
AIR DRYER DUST REMOVAL FILTER		
1	Capacity	943 SCFM
2	De-dusting	1µm
AIR DRYER PACKAGE		
1	Type	Heatless adsorption compressed air dryers
2	Max inlet pressure	232 psig
3	Min inlet pressure	58 psig
4	Capacity	850 SCFM (including purge loss)
5	Guaranteed Pressure Dew Point (PDP)	Less than -40°F
6	Desiccating agent	Aluminum oxide+ Molecular sieve
7	Vessel material	VTA
8	Dew point transmitter	Yes

4 ENVIRONMENTAL CONDITIONS

4.1 AMBIENT TEMPERATURE DATA

Ambient Temperature, Minimum Average: 64 °F (18° C)
 Ambient Temperature, Maximum Average: 93 °F (34° C)
 Ambient Temperature, Maximum: 118 °F (50° C)
 Ambient Temperature, Minimum: 36 °F (2.2° C0029)
 Wet Bulb Temperature: 88 °F (31 °C)

4.2 RAINFALL DATA

Maximum Daily Rainfall (24 hours): 10 in (251 mm)
 Highest Average Monthly Rainfall: 11.26 in (286 mm)

4.3 WIND DATA

Maximum Velocity: 100 mph
 Design Velocity: 120 mph
 Exposure factor C – flat open terrain, importance factor 1.15 – essential facility.

4.4 HUMIDITY

Relative Humidity: 20% to 80%

4.5 ICE/FOREST DATA

Not applicable.

4.6 ELEVATION

69 ft. (21 m)

4.7 EARTH QUAKE DESIGN DATA

Zone 2A of Uniform Building Code UBC 1997.

5 DELIVERY SCHEDULE

OGDCL preferred delivery period is within Sixteen-Eighteen WEEKS after issuing the PO (PURCHASE ORDER).

6 QA/QC AND TESTING REQUIREMENTS

All QA/QC to be carried out in accordance with relevant design code (NDT/ DPT etc.)

7 TERMS & CONDITIONS

- 7.1. Bidder is responsible for supply, commissioning, site acceptance test (SAT) and performance test (PT) of the supplied Instrument Air Dryer Package for 72 Hours continuous operation as per the data sheets at KPD-TAY Gas Processing Plant, OGDCL.
- 7.2. The bidder is responsible to clear any ambiguity before bidding for the dryer package.
- 7.3. The Contractor must follow Specification details and Standard Design Codes in manufacturing & commissioning of the dryer package.
- 7.4. **All QA/QC (NDT/DPT etc.) to be carried out in accordance with relevant design code. The relevant certificates including but not limited to **Material Test Certificates, MTCS, PQR, WPS, Radiography test reports etc.to be provided. Hydrostatic Test Certificate and all other quality certificates applicable under EN13445 to be provided****
- 7.5. Bidder will be responsible for any repair/replacement of parts if identified during SAT.
- 7.6. The bidder should supply the dryer package skid layout & civil foundation drawings immediately after issuance of formal Purchase order so that OGDCL can prepare the foundation.
- 7.7. The bidder shall provide the reference list of the installations in Pakistan. There should be at least 5 installations in reputed companies.
- 7.8. 220VAC, 50 Hz supply is available for the dryer. Bidder should arrange for any other supply needed in control panel.
- 7.9. Cabling should be in cable trays mounted on skid.
- 7.10. Maximum noise level after silencer should not exceed 85DB.
- 7.11 Bidder to submit the document control register (DCR) with their technical bid.
- 7.12 The bidder shall submit in hard & soft copies (not scanned images) of operating manuals, wiring drawings, Manufacture data book, As-built drawings, P&ID schematic drawings,
- 7.13 Bidder to supply specification & MSDS of the supplied desiccant in instrument air dryer.

- 7.14** Bidder to provide warranty of the whole package 12 months from date of commissioning or 18 months from date of delivery, whichever comes first.
- 7.15** Bidder shall submit OEM certificate for supply of dryer package.

ANNEXURE-1

TECHNICAL BIDS EVALUATION CRITERIA

This criterion is developed to evaluate the technical bids to be submitted for design, specifications and supply of Instrument Air Dryer.

Sr.	Criteria	Qualification Points		Requirement/ Reference
		Min Point	Max Point	
1	Minimum Ten years' experience for designing & supply of Instrument Air Dryers/Instrument Air Compressors.	20	30	<p><u>Bidders to submit:</u></p> <p>1.1 Company Design Experience profile/description of design work</p> <p><u>NOTE:</u> Bidders must obtain 20 points to achieve technical bid compliance requirement. 1 year correspond to 2 point.</p>
2	Offered Instrument air dryer must meet the required technical specifications & terms and conditions (Section 3.0 & 7.0).	40	40	<p><u>Bidders to Submit:</u></p> <p>2.1 Technical literature of offered dryer, Filled Annexure-2 of this document</p> <p><u>NOTE:</u> Bidder must obtain 40 points to achieve technical bid compliance requirement.</p>
3	<p>a) Minimum five years' experience as Company for Installation Commissioning of Instrument Air Dryers + Compressors.</p> <p>b) In case the bidder does not possess this capability then it will arrange Installation Commissioning from 3rd party having relevant five year experience.</p>	10	20	<p><u>Bidders to submit:</u></p> <p>3.1 Company Experience profile/description of their work completed under category of for installation & commissioning of Instrument Dryers or compressors etc.</p> <p><u>NOTE:</u> Bidders must obtain 10 points to achieve technical bid compliance requirement. Each year corresponds to 2 points.</p>
4	<p>a) Local support should be available for after sales issues, troubleshooting in case required in future. The company should have relevant service personnel to address the operational issues of dryer.</p> <p>b) In case bidder does not have local support/office then bidder may confirm to arrange support from its nearby office/resource from Pakistan if required by OGDCL.</p>	05	10	<p><u>Bidders to submit:</u></p> <p>5.1 Relevant documentation.</p> <p><u>NOTE:</u> Bidders must achieve 5 points to achieve technical bid compliance requirement. 10 points will be given if local office/support is available. 05 points if bidder agrees to arrange support from its nearby office/resource if required by OGDCL.</p>
N	Total Points	75	100	

Note: - Bidder must obtain 75 marks for qualification.