UCH COMPRESSION PROJECT

Design Engineering, Procurement (Supply), Construction, Installation/Erection,
Pre-Commissioning, Commissioning & Start-up (including performance testing and Reliability Guarantee Test) of UCH Front End Compression Project

Tender Enquiry No. PROC-FC/CB/PROJ/UCH (COM)-5155/2021

Pre-Bid Clarification-15

Sr. No.	Tender Document Reference	Description	OGDCL/ ENAR Response (10-Jan-2022)
1	**SEC - III (Scope of Work) Rev.2** **Section 2.5 "Modifications in the Existing Process System" Clause 1**	1. The new hydrate inhibitor injection skids shall be installed at UCH-I Plant wellheads (i.e. UCH-02, UCH-10, UCH-12, UCH-16, UCH-03, UCH-07, UCH-08, UCH-09 & UCH-28) (Refer Datasheet of Hydrate Inhibitor Injection Skid in Tender Document/Volume-IIA), which shall be operated during worst winter season and controlled by existing wellhead control panel. Company is requested to provide the approx. distance between wellhead control panel and Hydrate Inhibitor Injection Skid.	Approx. distance between Wellhead Control panel and new proposed Hydrate Injection Skid is 30.0 meters (tentative). However, EPCC bidder is responsible to finalize the same and submit to OGDCL/Engineering Consultant for review/approval during detailed engineering stage.
2	**SEC - III (Scope of Work) Rev.2** **Section 3.0 "MECHANICAL ENGINEERING "**	EPCC Contractor shall also provide fixed spray system for each Front End Compressor package. EPCC contractor shall also provide CO2 suppression system as per NFPA codes. "Company is requested to provide details of area or layout for CO2 suppression system will be provided for Front End Compressor package.	Please refer Plot plan 4985-PC-2201 (OVERALL PLOT PLAN) where area for Compressor packages have already been marked. For CO2 Suppression System, kindly refer project Document 0221-GS-9510-3 (Spec for Centrifugal Compressors for basic detail ,however, EPC Contractor shall develop detail engineering documents and layouts during detail engineering stage and submit to OGDCL/Engineering Consultant for review/approval during detailed engineering stage.
3	**SEC - III (Scope of Work) Rev.2** **4.0 ELECTRICAL ENGINEERING "**	There shall be supply and installation of 400/230V, 50 Hz, on-line Dual redundant complete UPS system with separate battery banks for each unit, along with distribution board for load distribution. Bidder understand the on-line redundant complete UPS system is required (UPS-A and UPS-B = total two UPS) instead of dual redundant (UPS-A+A and UPS-B+B, total four UPS). Pleas confirm.	Bidder's understanding is correct. Dual reduntant UPS means total two UPS (UPS-A+UPS-B) with separate battery banks for each unit and both shall be operating in parrallel load sharing mode. For operation and control philosophy, please refer 0221-ELB-6601-1 Single Line Diagram and 0221-ELA-6507 Specification for UPS System.

UCH COMPRESSION PROJECT

Design Engineering, Procurement (Supply), Construction, Installation/Erection,
Pre-Commissioning, Commissioning & Start-up (including performance testing and Reliability Guarantee Test) of UCH Front End Compression Project

Tender Enquiry No. PROC-FC/CB/PROJ/UCH (COM)-5155/2021

Pre-Bid Clarification-15

Sr. No.	Tender Document Reference	Description	OGDCL/ ENAR Response (10-Jan-2022)
4	**SEC - III (Scope of Work) Rev.2** **Section 5.0 INSTRUMENTATION AND CONTROL ENGINEERING**	Spare I/Os in exiting UCH-II Safety System are adequate enough to accommodate new ESD signals; however EPCC Contractor shall further evaluate the existing system for the new requirements during Pre-bid Site visit and any Hardware and software modification works required and identified in Plant existing Safety System for interfacing additional signals shall be included in EPCC Contractor scope. Company to provide spare I/Os list of existing UCH-II safety system and confirm its software licenses and uses capacity of CPU loading and soft tags to evaluate the existing system for new scope FEC project.	These details shall be shared with the successful bidder after award of the Contract.
5	**SEC - III (Scope of Work) Rev.2** **Section 5.0 INSTRUMENTATION AND CONTROL ENGINEERING**	Slug Catcher shall be installed at UCH-I area and Instruments and F&G I/Os related to new and existing Slug Catcher shall be interfaced in UCH-I Plant existing control Systems (DCS/ESD/F&G). EPCC Contractor shall evaluate the existing systems for the new requirements during Pre-bid Site visit, any Hardware and software modification works required and identified in Plant existing Control Systems (DCS/ESD/F&G) for interfacing required signals shall be included in EPCC Contractor scope. Company to provide spare I/Os list of existing UCH-I existing Control system ((DCS/ESD/F&G)) and confirm its software licenses and uses capacity of CPU loading and soft tags to evaluate the existing system for Instruments and F&G I/Os related to existing and new and Slug Catcher.	Evaluation the existing systems and identification of modification works for the new requirements had to be carried out during Pre-bid Site visit, further existing details documents shall be shared with the successful bidder after award of the Contract.

UCH COMPRESSION PROJECT

Design Engineering, Procurement (Supply), Construction, Installation/Erection,
Pre-Commissioning, Commissioning & Start-up (including performance testing and Reliability Guarantee Test) of UCH Front End Compression Project

Tender Enquiry No. PROC-FC/CB/PROJ/UCH (COM)-5155/2021

Pre-Bid Clarification-15

Sr. No.	Tender Document Reference	Description	OGDCL/ ENAR Response (10-Jan-2022)
6	**SEC - III (Scope of Work) Rev.2** **Section 5.0 INSTRUMENTATION AND CONTROL ENGINEERING**	EPCC contractor shall supply & Install new Telephone set in MCC room at UCH-II. EPCC Contractor shall supply and lay cables along with all accessories which also include the installation of Wall outlet faceplates for telephone and LAN connections. Cables shall be laid from UCH-II existing MCC to new MCC, provisions are available at existing MCC room. Newly proposed telephone system shall be linked with plant existing Telephone exchange. Existing exchange points, new points and allocation shall further be finalized during detail engineering stage. Bidder understand Cables shall be laid from UCH-II existing MCC to new MCC for telephone and LAN connection and bidder did not consider telephone cable from existing telephone Exchange to new MCC. Please confirm.	As mentioned " EPCC Contractor shall supply and lay cables along with all accessories which also include the installation of Wall outlet faceplates for telephone and LAN connections. Cables shall be laid from UCH-II existing MCC to new MCC, provisions are available at existing MCC room." Bidder to comply the tender requirement and supply and install all required material along with cables etc.
7	**Vol-II, IIB Mechanical, Specifications**	The piping material specification “DC” does not exist in the document “0221-PA-2000-0 (Specification for Piping design and Material)”, please provide.	Attached.
8	**Vol-II, IIB Mechanical, Drawings**	There is no details of existing flare header and oily water system in the provided piping layout plans in the FEED package. Please provide for identification of Tie-In locations.	Please refer P&IDs and native Plot plan to estimate piping lengths as piping layouts were developed for 'indicative' purpose only. Further, a pre-bid site visit was arranged to physically observe the site and tie-in locations. Therefore, bidder to comply with the tender requirements.
9	-	Bidder understands that the existing closed drain network in UCH-I & II is underground and closed drain network in current scope of work will be underground and connected to existing network.	Closed drain in current scope shall be 'underground' while connecting with existing closed drain network. Further, bidder to adhere with tender requirements.

NOMINAL PIPE SIZE		½ "	¾"	1"	1 ½ "	2"	3"	4"	6"	8"	10"	12"	14"	16"	18'	20"	24"	26"	28"	30"
NOMINAL WALL THICKNESS	Threaded	SCH.80S				SCH-80S													0.938"	
	Socket welded	SCH.80S																		
PIPE		ASTM A-312 TP 304L (SMLS)P.E.AS PER ASME B36.19M.				ASTM A-312 TP 304L (SMLS) B.E.AS PER ASME B36.19M.							ASTM A-312 TP 304L (SMLS) B.E. or ASTM A-358 TP 304L (EFW) Class 1 B.E							
FLANGES		SW 600 LB. RF ASTM A-182 F304L TO ASME B16.5				WN 600 LB. RF ASTM A-182 F304L TO ASME B16.5 BORE TO MATCH PIPE														
FITTINGS		SW 3000 LB ASTM A-182 F304L TO ASME B16.11				BW TO MATCH PIPE ASTM A-403 WP 304LTO ASME B16.9														
OLETS		SW 3000 LB ASTM A-182 F304L TO MSS SP-97				BW, BORE TO MATCH PIPE ASTM A-182 F304L TO ASME B16.9														
GASKETS		600 LB SPIRAL WOUND TO ASME B16.20 CONSISTING OF 4.5mm THK. TYPE 316 ST. STEEL STRIP WITH NON-ASBESTOS FILLER & 3.2mm THK. CARBON STEEL OUTER AND INNER RINGS.																		
PIPE NIPPLES		Material as pipe 100mm long																		
SWAGE NIPPLES		Material as pipe to BS 3799																		
BOLTING		TO ASTM A-320GR. B8 C/W 2 HEX NUTS TO ASTM A-194 GR. 8.																		
SPEC. BLIND/ SPADE & SPACER						SPEC. BLIND ASTM A-240 GR. 304L							SPADE & SPACER ASTM A-240 GR. 304L						
VALVES	GATE	VG-105 (SW x THD)				VG-109														
		VG-106 (SW)																		
	GLOBE	VGL-104 (SW)				VGL-106							USE GATE VALVE							
	CHECK	VC-104 (SW)				VC-105														
	BALL (REDUCED BORE)	VB-106 (SW)				VB-108														
	BALL (FULL BORE)					VB-109														

SERVICE: H.P. Plant Gas/liquid Piping, Chemical Inhibition.

90º BRANCH CONNECTIONS

NOMINAL BRANCH PIPE SIZE (INS)

NOMINAL RUN PIPE SIZE (INS)	½	¾	1	1½	2	3	4	6	8	10	12	14	16	18	20	24
24	S	S	S	S	W	W	W	W	W	R	W	W	R	R	E	
20	S	S	S	S	W	W	W	W	W	R	W	R	R	E		
18	S	S	S	S	W	W	W	W	R	R	R	R	E			
16	S	S	S	S	W	W	W	R	R	R	R	E				
14	S	S	S	S	W	W	W	W	R	R	R	E				
12	S	S	S	S	W	W	W	R	R	R	E					
10	S	S	S	S	W	W	W	R	R	E						
8	S	S	S	S	W	W	R	R	E							
6	S	S	S	S	W	R	R	E								
4	S	S	S	S	R	R	E									
3	S	S	S	S	R	E										
2	S	S	S	S	E											
1½	R	R	R	E												
1	R	R	E													
¾	R	E														
½	E															

LEGEND

E = EQUAL TEE
S = SOCKOLET
R = REDUCING TEE
W = WELDOLET

DESIGN CONDITIONS		STUD BOLTS		
TEMP.	PRESS.	NOMINAL PIPE SIZE	DIAMETER (Ins) & LENGTH (mm)	NO. OF BOLTS
ºF	**PSIG**	½ "	1/2 x 80	4
15 to 100	1480	¾"	5/8 x 90	4
200	1350	1"	5/8 x 90	4
300	1315	1 ½ "	3/4 x 110	4
400	1270	2"	5/8 x 110	8
500	1200	3"	3/4 x 130	8
600	1095	4"	7/8 x 150	8
650	1075	6"	1 x 170	12
		8"	1-1/8 x 200	12
		10"	1-1/4 x 255	16
ºC	**BARG**	12"	1-1/4 x 255	20
-9 to 38	102.1	14"	1-3/8 x 270	20
50	100.2	16"	1-1/2 x 295	20
100	92.8	18"	1-5/8 x 315	20
150	90.5	20"	1-5/8 x 335	24
200	87.6	24"	1-7/8 x 390	24
250	83.4			
300	77.5			
350	73.9			

PIPING MATERIAL SPECIFICATION

PROJECT Gas Plant Facility Project

SPEC. DC

CORROSION ALLOWANCE 0.0 mm

DESIGN CODE ASME B31.3

RATING ASME 600 LB RF

MAIN MATERIAL STAINLESS STEEL

JOB NO. 14 - 4985

Rev.	Date:	Description	Prep. by:	Chk. by:	Appr. by:
A	10/1/2011	FIRST ISSUE	WRK	MK	FS

Doc. No. 4985-PA-2002-09(Sheet 1 of 2)

NOTES

A. PRESSURE / TEMPERATURE LIMITS ARE BASED ON FLANGE RATINGS IN ACCORDANCE WITH ANSI / ASME B 16.5 LATEST EDITION.

B. PRESSURE / TEMPERATURE RATING NOT APPLICABLE TO SOFT SEATED VALVES. E,G. BALL VALVES .

C. TEST PRESSURE: 2100PSIG, REFER TO LINE LIST FOR HYDROSTATIC TEST PRESSURE.

D. STAINLESS STEEL MATERIAL SHALL BE SOLUTION ANNEALED.

E. STUDBOLT LENGTHS SHOWN ARE BASED ON ANSI/ASME B 16.5 LATEST EDITION AND ARE FOR STANDARD FLANGE BOLTING, SPECIAL BOLT LENGHTS E.G. FOR SPECTACLE BLIND, TO BE CALCULATED TO SUIT.

F. COLD WORKING IS NOT PERMITTED.

G. ALL COMPONENTS TO BE WELDED SHALL MEET THE FOLLOWING REQUIREMENTS.

(a) CARBON CONTENT = 0.030 % MAX

H. IF IMPACT TESTING IS REQUIRED REFER TO PROJECT SPECIFICATION FOR PIPING DESIGN AND MATERIAL AND

I. ALL PIPING MATERIAL SHALL BE COMPLIANCE WITH NACE MR-01-75/ ISO15156 (LATEST EDITION)

J. FOR DETAIL REQUIREMENT OF VALVES REFER DOC#4985-PA-2003.

ADDITIONAL NOTES

PIPING MATERIAL SPECIFICATION	**PROJECT** Gas Plant Facility Project							
ENAR	**SPEC.** DC	**CORROSION ALLOWANCE** 0.0 mm	**DESIGN CODE** ASME B31.3	A	10/1/2011	FIRST ISSUE	WRK	MK	FS
				Rev.	Date:	Description	Prep. by:	Chk. by:	Appr. by:
	RATING ASME 600 LB RF	**MAIN MATERIAL** DUPLEX STEEL	**JOB NO.** 14 - 4985	Doc. No. 4985-PA-2002-09(Sheet 2 of 2)					