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-16

Sr. No.	Tender Document Reference	Description	OGDCL/ ENAR Response (10-Jan-2022)
1	**P&ID UCH-I Slug Catcher M-200 & M-210**	UCH-I Slug Catcher M-200 is designed for 127 MMSFCD gas flow and UCH-I Slug Catcher M-210 is designed for 100 MMSCFD gas flow. Please advise how the flow between the two slug catchers will be balanced at 100 MMSCFD each as no flow control valves are provided at individual slug catcher gas outlet line. For UCH-II Eastern, Central & Western Lobe Slug Catchers, FCV is provided at each separator gas outlet line. Please specify whether bidder to consider individual FE/FT with FCV at gas outlet line of UCH-I Slug Catcher M-200 and UCH-I Slug Catcher M-210.	It is typo error, both slugcatchers shall be operated in parallel operation and flow distribution shall be via hydraulic balance between them. Bidder to follow the operation philosophy as depicted in P&IDs, further, if any changes in philosophy and system is anticipated during detail engineering than bidder to adhere it without any change order.
2	**P&ID UCH-II Fire Water Distribution**	No fire water ring is provided & shown around new Front End Compression area as supplementary fire protection. Usually, clients in oil & gas industry also requires to provide hydrants & monitors around compressors area in addition to water spray system as supplementary. Please specify whether bidder to include hydrants & monitors around compression area. Further, advise total no. of hydrant and monitors to be considered by bidder for this project.	FEED level working is shown in P&IDs, however, bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering along with proper calculations.
3	**P&ID UCH-II Fire Water Distribution**	Please confirm that deluge valve is required to be provided for water spray system for compressors.	FEED level working is shown in P&IDs, however, bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering along with proper calculations.
4	**P&ID UCH-II Fire Water Distribution**	Please confirm that individual deluge valve with water spray system is required to be provided for each compressor (total = 3 deluge systems).	FEED level working is shown in P&IDs, however, bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering along with proper calculations
5	**P&ID UCH-II Fire Water Distribution & Plot Plan**	Foam skid is not shown on P&ID and plot plan and tie-in for fire water connection is also not shown. Please provide updated P&ID and plot plan. Further, bidder understands that foam skid will be installed in safe area.	FEED level working is shown in P&IDs, however, bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering along with proper calculations.

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6	**0221-DS-1706-1 (Instrument Air and Nitrogen Generation Package)**	Note-3 is mentioned on datasheet that EPCC to identify & provide any variation/deviation from provided code & Standard i.e. API-619/ISO-10440-1. Bidder understands that readily available & cost effective non-API air compressors are acceptable OR Bidder has to consider API machine with certain standard Vendor deviations as per this clause. Please advise.	Bidder to provide Vendor deviations on vendor letterhead for API machine with proper justifications.
7	**0221-A-1004-2 (Process Design of Compressor Trains)**	Please confirm that manually operated foam spray system for lube oil system of compressors is required to be considered.	Bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering.
8	**0221-A-1004-2 (Process Design of Compressor Trains) Table 12**	As per Table 12 of referred document, water application rate is considered as 2 L/min/m2 for water spray system for compressor area. However, 2 L/min/m2 is applicable for miscellaneous process equipment for equipment not enveloped in flame as per para 4.3 and Table 9 of same document. Further, para 4.1 and Table 8 of same document enlists that **10 L/min/m2** is applicable for compressors handling flammable gases enveloped in fire scenario. Hence, the calculations done in Table 12 do not seem correct as 2 compressors in radiation zone (with 2 L/min/m2) have been considered instead of considering 1 compressor (with 10 L/min/m2) under fire zone. By considering 1 compressor under fire zone, calculated fire water rate for water spray system for individual compressor comes out to be 199 GPM. Hence, bidder understands that water spray system for individual compressor should be sized for 199 GPM (instead of 159 GPM specified in Tender). Bidder understands to proceed with basis that the 3 compressors will be segregated into three different/separate fire zones and only one compressor will be under fire at any time. Please review & confirm the basis.	Noted, however, bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering along with proper calculations. Individual Compressor, shall be part of new FEC Compression area, to be installed at existing Plant site, accordingly fire zone philosophy shall be finalized by the EPC Contractor during detail engineering stage for safe, continuous and trouble free operation of Compressors and plant.
9	**0221-A-1004-2 (Process Design of Compressor Trains)**	It is mentioned that tentatively 32 nos. of sprinklers are required for Turbo-Compressor's cooling. Bidder understands that these 32 nos. of sprinklers are required for two compressors, please confirm.	FEED level information is provided in tender documents, however, bidder shall design the Fire water ring, distribution header, deluge, foam and sprinkler & hydrant monitors system based on firmed detailed engineering along with proper calculations.
10	**P&ID UCH-II Logic Box**	At TIP-008 (UCH-II Raw Gas Header Tie-in), no double block isolation valves are shown & marked on P&ID. However, isolation philosophy in scope of work requires to provide double isolation block valves at all tie-in points for process connections. Please advise 28" double block valves are required to be included on P&ID at TIP-008.	Bidder to follow the scope of work Tie-In point isolation philosophy.
11	**Tender documents Case-5155-Vol-II IIB Mechanical Piping material specification document # "0221-PA-2000-0" Para 3.3-b**	This clause defines all pipes and fittings used will be seamless. Please note that maximum size used in the project is 36" and mostly the large bore piping is used for low pressure service like Flare etc. Seamless pipe and fittings for large bore pipe sizes are not readily available in the market and have substantial cost impact also. The contractor suggests that welded pipe and fittings for NPS 8" and above be accepted to be used on the project, which is a standard practice and has been supplied by Contractor on previous Oil & Gas projects. Please confirm.	Not acceptable. Bidder to adhere with tender requirements.