

CONTRACT NO. 66-0215
 ITEM NO. 22K01FN
 SERVICE LIQUID RING COMPRESSOR
 MEDIUM CHLORINE GAS DRY WITH 50PPM MOISTURE

| SR NO | DESCRIPTION | UNITS | ENQUIRY SPECIFICATIONS | VENDOR'S DATA |
|-------|--|----------------------|-------------------------------------|---------------|
| 1 | PROPOSAL REFERENCE | - | | |
| 2 | Model | - | Vendor to specify | |
| 3 | Quantity - Working / Standby | - | 1 / 0 | |
| 4 | Service liquid | - | 96 - 98% H2SO4 | |
| 5 | Capacity at Suction (Normal / minimum) | m3/hr | 1320 / 1445 | |
| 6 | Suction Pressure (Normal / minimum) (at battery) | kg/cm ² a | 1.10 / 1.02 | |
| 7 | Discharge pressure (at battery limit) | kg/cm ² a | 4.889 | |
| 8 | Suction temperature (at battery limit) | deg C | 25 | |
| 9 | Discharge temperature (at battery limit) | deg C | 40 maximum | |
| 10 | PERFORMANCE DATA | - | | |
| 11 | Rated Shaft Power | kW | Vendor to specify | |
| 12 | Efficiency | % | Vendor to specify | |
| 13 | Speed | RPM | Vendor to specify | |
| 14 | Safety valve set pressure | kg/cm ² a | Vendor to specify | |
| 15 | Power at SV set pressure | kW | Vendor to specify | |
| 16 | Recommended Motor Rating | kW | Vendor to specify | |
| 17 | No. of stages | - | Vendor to specify | |
| 18 | Casing design /test Pressure | kg/cm ² | Vendor to specify | |
| 19 | Buffer vessel / separator volume | litres | Vendor to specify | |
| 20 | Noise level | dB(A) | 85 @ 1m | |
| 21 | Coupling make // Type | - | Rathi / Unique / Flender / Flexible | |
| 22 | Impeller diameter / Width | mm | Vendor to specify | |
| 23 | Sealing liquid capacity | m3 | Vendor to specify | |
| 24 | Sealing liquid Circulation | m3/hr | Vendor to specify | |
| 25 | Make-up liquid circulation | Ltr/day | Vendor to specify | |
| 26 | Make-up liquid Pressure | kg/cm ² g | Vendor to specify | |

**thyssenkrupp Industrial
Solutions (India) Pvt. Ltd.**

**Annexure IV
TECHNICAL REQUIREMENT SHEET**

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|----|----------------------------|-------|-------------------|--|
| 27 | Make-up liquid Temperature | deg C | Vendor to specify | |
|----|----------------------------|-------|-------------------|--|

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|----|---|--------------------------|----------------------------------|--|
| 28 | SHAFT SEAL | - | Flowserve/Johncrane/EagleBurmanr | |
| 29 | Seal type | - | Mechanical Cartridge | |
| 30 | Stationary / rotary faces | - | SiC / SiC | |
| 31 | Flush Liquid | - | H2SO4 | |
| 32 | Flush Liquid Pressure & temp | kg/cm2 g & deg C | Vendor to specify | |
| 33 | Piping Material | - | SS 316 | |
| 34 | HEAT EXCHANGER | - | | |
| 35 | Make / Model | - | Vendor to specify | |
| 36 | No. of plates installed / max no. of plates / heat exchanger surface area | no. / m2 | Vendor to specify | |
| 37 | Water Flow rate | m3/hr | Vendor to specify | |
| 38 | Service liquid Temperature in/out | deg C | Vendor to specify | |
| 39 | Chilled Water Temperature in/out | deg C | 10 / 15 | |
| 40 | Design Pressure | kg/cm ² a | Vendor to specify | |
| 41 | Design Temperature | deg C | Vendor to specify | |
| 42 | Fouling Factor (H2SO4 / Chilled water) | m ² hr C/Kcal | 0.00005 / 0.00015 | |
| 43 | LMTD | deg C | Vendor to specify | |
| 44 | Heat Duty For Heat Exchanger | kcal/hr | Vendor to specify | |
| 45 | Overall Heat Transfer Coefficient (clean / dirty) | kcal/hr m ² K | Vendor to specify | |
| 46 | MATERIAL OF CONSTRUCTION | - | | |
| 47 | Casing | - | WCB | |
| 48 | Wear Casing | - | Vendor to specify | |
| 49 | Head Cover | - | Vendor to specify | |
| 50 | Impeller | - | SS 316 | |
| 51 | Cone | - | SS 304 | |
| 52 | Shaft / Shaft Sleeve | - | Vendor to specify / Hastelloy C | |

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|----|--|-------|--|--|
| 53 | Suction vessel / Separator | - | SA 516 GR.70 (Design as per Annexure III - Minimum requirement of package unit.) | |
| 54 | Demister | - | SS316L | |
| 55 | Coupling / Coupling Guard | - | CS / CS Painted | |
| 56 | Interconnecting Pipes / Flushing pipes | - | SA 106 Gr. B / SS 316 | |
| 57 | Gaskets | - | Non-Asbestos | |
| 58 | SCOPE OF SUPPLY | - | As per enquiry specification | |
| 59 | COMMISSIONING SPARES | - | 1) Mechanical Seal complete with gaskets - 1 nos. 2) Compressor gaskets - 1 set 3) Oil seals & O-Rings - 1 set | |
| 60 | 2 YEARS OPERATIONAL SPARES | - | Minimum as per enquiry specification | |
| 61 | INSPECTION & TESTING | - | As per enquiry specification | |
| 62 | PERFORMANCE TOLERANCES | - | 1) No negative tolerance on capacity. 2) No positive tolerance on discharge temperature 3) No positive tolerance on rated power | |
| 63 | DOCUMENTATION | - | As per enquiry specification | |
| 64 | DELIVERY PERIOD | weeks | From date of LOI | |
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