









| | | | | | | | | | |
|--|---|------|-------|------|------|------|--|-------------------------|--------|
| OWNER:  شرکت سست و سویی توهمه ایران (سهامی عامه) SSTI | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT | | | | | | EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT | | |
| | COMPRESSOR MOTOR DATA SHEET FOR NITROGEN GAS BOOSTER | | | | | |  Netherlands | | |
| MC :  شرکت سست و سویی توهمه ایران (سهامی عامه) SSTI | Project | Area | Phase | Unit | Dis. | Doc. | Seq. | Contract No : 52-98/445 | |
| Owner Document Number: 17811-10A | BU | 20 | VD | 303 | EL | DSH | 0051 | Rev.: | Page |
| | | | | | | | | 03 | 1 of 4 |

COMPRESSOR MOTOR DATA SHEET FOR NITROGEN GAS BOOSTER

| | | | | | | |
|-----|------------|---------------------------|----------|---------|----------|----------|
| | | | | | | |
| 03 | 09/11/2021 | Approved for Construction | KP | LDM | PW | |
| 02 | 14/10/2021 | For approval | KP | LDM | PW | |
| 01 | 20/09/2021 | For approval | KP | LDM | PW | |
| 00 | 08/12/2020 | For approval | KP | LdM | PW | |
| Rev | Date | Purpose of Issue | Prepared | Checked | Approved | AC Code |
| | | | | | Class: 1 | Phase: P |

| | | | | | | | | | | |
|---|--|---|--------------|--------------------------|-----------------------------------|-------------------------------------|--|------|-------------------------|-----------------|
| OWNER:  | | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT | | | | | EPC CONTRACTOR:  | | | |
| MC:  | | Motor Data Sheet (Item No: P-2007 A/B) | | | | | VENDOR:  | | | |
| Document Number: | | Project | Area | Phase | Unit | Dis. | Doc. | Seq. | Contract No : 52-98/445 | |
| | | BU | 20 | VD | 303 | EL | DSH | 0051 | Rev.: 03 | Page: 3 of 4 |
| General Design Data | Tag Nos : | 20-C-1002-M | | | Manufacturer : | WEG | | | | |
| | QTY. : | 1 | | | Plant Location : | Busher | | | | |
| | Client : | Bushehr Petrochemical Company | | | Purchase Order No. : | - | | | | |
| | Applicable Document | | | | | Environmental Condition | | | | |
| | Project Specification : | BU-20-D-000-EL-SPC-521 | | | Location : | Outdoor | | | | |
| | Paint Specification : | BU-20-D-000-PI-SPC-409 | | | Ambient Air Temperature : | Min. 5°C | Max. 52°C | | | |
| | Applicable Standard : | IEC 60034 | | | Humidity : | 80% | | | | |
| | | | | | | Altitude : | 8.5m above Sea Level | | | |
| | | | | | | Area Classification(IEC 60079-10) : | Zone 2, IIB, T3 | | | |
| | Power System | | | | | | | | | |
| System Voltage & Variations : | | 400V ± 5% | | | System Earthing : | Solidly Earthed | | | | |
| System Frequency & Variations : | | 50Hz ± 2% | | | Short circuit capacity at input : | | | | | |
| Basic Data | Particulars of Equipment | | Unit | Purchaser's Requirements | | | Vendor's Data | | | |
| | Frame Size | | | VTA | | | 225S/M | | | |
| | Rated Voltage | | V | 400 | | | 400 | | | |
| | Rated Frequency | | Hz | 50 | | | 50 | | | |
| | Required Shaft Brake Power | | KW | * | | | 37 | | | |
| | Rated Power | | KW | * | | | 45 | | | |
| | No. of Phases | | | 3 phases | | | 3 | | | |
| | Duty / Service Factor | | | S1 / 1 | | | S1 | | | |
| | No. of Poles / Synchronous Speed | | | * | | | 4 / 1500 | | | |
| | Stator Connection | | | Delta | | | Delta | | | |
| | Insulation Class | | | Class F | | | F | | | |
| | Design Temperature | | | 48 °C | | | 55 | | | |
| | Temperature Rise | | | Class B | | | B | | | |
| | Ingress Protection Classification (IEC 60529) | | | IP55 | | | IP55 | | | |
| Cooling Type (IEC 60034-6) | | | TEFC, IC 411 | | | TEFC | | | | |
| Performance Characteristics | Full Load Current | | A | VTA | | | 83 | | | |
| | Efficiency (FL / 3/4 FL / 1/2FL) | | PU | VTA | | | 95,4 / 95,0 / 94,2 | | | |
| | Power Factor (FL / 3/4 FL / 1/2FL) | | PU | VTA | | | 0,82 / 0,74 / 0,62 | | | |
| | Full Load Torque | | Nm | VTA | | | 290 | | | |
| | Break Down Torque | | % | VTA | | | 330 | | | |
| | Pull Up Torque | | % | VTA | | | 245 | | | |
| | Full Load Speed | | rpm | VTA | | | 1485 | | | |
| | Slip at Full Load / 75% Load | | % | VTA | | | 1 | | | |
| | Over Speed Capability | | | VTA | | | No overspeed capability | | | |
| | No Load Losses | | watt | VTA | | | 290 | | | |
| Starting Characteristics | Starting Method | | | Direct on Line | | | DOL | | | |
| | Starting Performance (IEC60034-12) | | | VTA | | | 8,3 | | | |
| | Maximum Allowable Stall Time (Hot / Cold) | | | VTA | | | 3 / 2 | | | |
| | Maximum No. of Successive Starts | | | VTA | | | 3 | | | |
| | Starting Current | | PU | VTA | | | 8,3 | | | |
| | Starting Current | | A | VTA | | | 688 | | | |
| | Locked Rotor Power Factor | | PU | VTA | | | 0,5 | | | |
| | Locked Rotor Torque | | % | VTA | | | 290 | | | |
| | Run-Up Time | | Sec. | VTA | | | 8 | | | |
| | Allowable Run-Up Time from Cold State | | Sec. | VTA | | | 27 | | | |
| | Allowable Run-Up Time from Hot State | | Sec. | VTA | | | 15 | | | |
| Hazardous Area Certification | Motor Explosion Protection Type / Gas Group / Temp. Class | | -- | Ex d IIB T3 | | | Ex d IIB T4 | | | |
| | Terminal Boxes Explosion Protection Type / Gas Group / Temp. Class | | -- | Ex d IIB T3 | | | Ex d IIB T4 | | | |
| | Ex "e" Motor t ₀ Time | | Sec. | VTA | | | N/A | | | |
| | Recommended Thermal O/L Relay | | | VTA | | | 10 | | | |
| | Certifying Authority | | -- | VTA | | | as per IECex certificate | | | |

| | | | | | | | | | | |
|--|---|---|--------------------------------|--|-----|---------------------|--|-----------------|----|--------|
| OWNER: | | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT | | | | | | EPC CONTRACTOR: | | |
| MC : | | Motor Data Sheet (Item No: P-2007 A/B) | | | | | | VENDOR: | | |
| Contract No : 52-98/445 | | | | | | | | Rev.: | | Page: |
| Document Number: | | BU | 20 | VD | 303 | EL | DSH | 0051 | 03 | 4 of 4 |
| Mechanical Detail | Particulars of Equipment | | Unit | Purchaser's Requirements | | | Vendor's Data | | | |
| | Mounting (IEC 60034-7) | | | * | | | B3T | | | |
| | Stator Frame Material | | | Ferromagnetic Material | | | Ferromagnetic Material | | | |
| | Enclosure Material | | | Sheet Steel/ Cast Iron | | | cast iron | | | |
| | Rotor Cage Material | | | Copper/ Die Cast Aluminium | | | Die cast aluminium | | | |
| | Cooling Fan Material | | | Aluminium, Cast Iron, Steel, Brass, Bronze | | | aluminium | | | |
| | Rotation Facing Drive End (CW/CCW) | | | * | | | Both | | | |
| | Finish Color | | | Gentian Blue RAL-5010 | | | RAL 5010 | | | |
| | Motor Weight | | Kg | VTA | | | 561 | | | |
| | Rotor (Uncoupled) Inertia | | Kg.m2 | VTA | | | 0,7346 | | | |
| | Driven Load Inertia (Related to Motor Speed) | | Kg.m2 | * | | | TBC | | | |
| | Coupling Type | | | Direct/ Gear Box/ Pulley | | | Pulley | | | |
| | Maximum Sound Pressure Level at one Meter (Full Load) | | dB(A) | Comply with IEC 60034-9 & Note 5 | | | 63 | | | |
| | Sound Power level | | dB | VTA | | | N/A | | | |
| | Noise Silencer | | Yes/No | VTA | | | No | | | |
| | Integral Breather / Drain (IEC60034-5) | | Yes/No | VTA | | | No | | | |
| | Drive End Bearing Type/ Make & Size | | | VTA | | | 6314-C3 | | | |
| | No. of Drive End Bearings | | | VTA | | | 1 | | | |
| | None Drive End Bearing Type / Make & Size | | | VTA | | | 6314-C3 | | | |
| | No. of None Drive End Bearings | | | VTA | | | 1 | | | |
| | Method of Bearing Lubrication | | | VTA | | | grease nipple | | | |
| | Bearing Ingress Protection (IEC 60529) | | | IP55 | | | IP55 | | | |
| | Minimum Bearing Lifetime, Motor Only | | hr | 40000 | | | 40000 | | | |
| | Maximum Relubrication Interval | | hr | 4000/2000 for horizontal/vertical motors | | | 7000 | | | |
| | Shaft | | | Extended / Solid / Hollow | | | solid | | | |
| | Max. Shaft Voltage | | mV rms | VTA | | | N/A | | | |
| | Insulated Bearings | | Yes/No | (Note 4) | | | No | | | |
| | Bearing Insulation Rating | | KV | VTA | | | N/A | | | |
| Rotor Axial Float | | + / - mm | VTA (If applicable) | | | N/A | | | | |
| Vibration at No Load, Self Mounted, Peak to Peak | | mm/S | VTA (Comply with IEC 60034-14) | | | as per IEC 60034-14 | | | | |
| Critical Speed | | rpm | (Note 6) | | | N/A | | | | |
| Lifting Lug | | Yes/No | Yes | | | Yes | | | | |
| Accessories | Anti Condensation Heater | | Yes/No | No | | | No | | | |
| | Anti Condensation Heater Power | | W | - | | | N/A | | | |
| | Anti Condensation Heater Voltage | | VAC | - | | | N/A | | | |
| | Winding Temperature Detector | | Yes/No | No | | | No | | | |
| | Bearing Temperature Detector | | Yes/No | No | | | No | | | |
| | Frame Earth / Terminal Box Earth | | Yes/No | Yes (External Stud /Internal Terminal) | | | Yes (External Stud /Internal Terminal) | | | |
| | Accelerometer Shock Pulse Measurement Device | | Yes/No | VTA | | | No | | | |
| | Anti Rotational Device | | Yes/No | VTA | | | No | | | |
| | Vibration Switch | | Yes/No | VTA | | | No | | | |
| | Sun Canopy | | Yes/No | VTA | | | No | | | |
| Terminal Box & Cable Connection | Differential Protection CT's in Neutral Terminal Box | | Yes/No | NO | | | No | | | |
| | Ingress Protection of Terminal Box | | -- | IP55 | | | IP56 | | | |
| | Power Terminal Box Type | | -- | Phase Insulated | | | Phase (Air) Insulated | | | |
| | Power Terminal Box Location (IEC 60034-7) | | -- | Top or Right (looking from drive end) | | | Top | | | |
| | Power Cable Type | | -- | Cu/XLPE/SWA/PVC | | | Cu/XLPE/SWA/PVC | | | |
| | Power Cable No. & Size | | -- | ** | | | 4 X 25 Sqmm | | | |
| | Power Cable Gland & Entries | | -- | ** | | | 1 x M40 | | | |
| | Power Cable Entry Direction | | -- | ** | | | Side | | | |
| | Heater Cable Type | | -- | - | | | N/A | | | |
| | Heater Cable No. & Size | | -- | - | | | N/A | | | |
| | Heater Cable Gland & Entry | | -- | - | | | N/A | | | |
| | Instrument Cable Type | | -- | ** | | | N/A | | | |
| Instrument Cable No. & Size | | -- | ** | | | N/A | | | | |
| Instrument Cable Gland & Entry | | -- | ** | | | N/A | | | | |

Note 1: Vendor to Advise

Note 2: (*) in "Purchaser Requirement" column should be filled out by driven equipment vendor.

Note 3: (**) Will be informed to motor vendor after receiving preliminary motor data.

Note 4: The shaft voltage shall not exceed 300mV RMS, unless bearings shall be fully insulated from the motor carcass and/or bedplate to prevent a flow of shaft current.

Note 5: The sound pressure level of the loaded machine shall not exceed 77 dB(A) in the work area, measured in accordance with ISO 1680.

Note 6: The machine shall have a rigid, under critical rotor-bearing system with first critical speed not lower than 125 % of the synchronous speed.