

 <b>MEG ENERGY</b>	<b>CHRISTINA LAKE REGIONAL PROJECT</b> <b>Phase 3A EPC for Central Plant Facilities</b>	 <b>SNC-LAVALIN</b>
<b>SLI Project No. 511036</b>		

 <b>SNC-LAVALIN</b>	<input type="checkbox"/> A1 Not suitable to initiate fabrication. modify as noted, resubmit for review
Vendor's drawing review for conformity with specifications and design drawing.	<input type="checkbox"/> B1 Suitable to initiate fabrication as noted. modify as noted, resubmit for review
This review does not relieve the vendor of his responsibility for errors in design and detailing as detailed in his contract.	<input type="checkbox"/> C1 Suitable to fabricate to completion as noted. submit final documents including as-builts as required
	<input checked="" type="checkbox"/> D1 Suitable to fabricate to completion. submit final documents including as-built documents as required
	<input type="checkbox"/> E1 Not suitable as final documents as noted. modify as noted and resubmit.
	<input type="checkbox"/> F1 Suitable as final documents. no further resubmittal required (unless revised by vendor)

Vendor: Sulzer Pumps (US) - P00031	No.: MDS100130449-0010-01	Rev: 3	Date Rec'd 2013/11/22
Doc. Title: D00.01 - Induction Machine API 541 4TH Edition - DATA SHEETS- Tag: 3A-P-304 ABC			

Client Code:	Project: MEG Phase 3A EPC		
Reviewed by: <i>Jankov L</i> Date: <i>2/DEC/2013</i>	Document No P-5411-01-0032	Submittal 03	

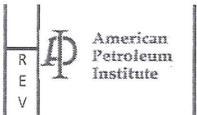
# MDS100130449-0010-01

Suizer SO Number	100130449
Suizer Item Number	0010
Purchaser	MEG ENERGY CORPORATION
End User	MEG ENERGY CORPORATION
Project Name	CHRISTINA LAKE REGIONAL PROJECT PHASE 3A - CENTRAL PLANT FACILITIES
Customer PO Number	541101
Service	HIGH PRESSURE BOILER FEED WATER PUMP
Pump Site	CHRISTINA LAKE REGIONAL PROJECT PHASE 3A
Pump Tag/Item Number	3A-PM-304A, 3A-PM-304B, 3A-PM-304C

REV	AP American Petroleum Institute	INDUCTION MACHINE API 541 4TH Edition -- DATA SHEETS U.S. CUSTOMARY UNITS		JOB NO. <u>511036</u> ITEM / TAG NO. <u>3A-PM-304A/B/C</u>
				PURCHASE ORDER NO. <u>511036-300-45-MR-5411-0001</u>
				REQ / SPEC NO. _____ REVISION NO. <u>3</u> DATE <u>11-20-13</u> BY <u>IAN</u> PAGE <u>1</u> OF <u>6</u>
1	FOR / USER	<u>MEG Energy CL03A Project</u>	DRIVEN EQUIPMENT	<u>HP Boiler Feed Water Pump</u>
2	SITE LOCATION	<u>Conklin, Alberta</u>	QUANTITY	<u>3</u>
3	SUPPLIER	<u>SIEMENS</u>	SUPPLIER PROJECT NO.	<u>SNP00665</u>
<b>GENERAL</b>				
4	Applicable to:	<input type="radio"/> Proposal <input checked="" type="radio"/> Purchase <input checked="" type="radio"/> As built		
5	NOTE:	<input checked="" type="radio"/> DATA SHEET STATUS <input type="radio"/> INDICATES INFO. TO BE COMPLETED BY PURCH. <input type="checkbox"/> BY MANUFACTURER WITH PROPOSAL <input checked="" type="checkbox"/> BY MANUFACTURER AFTER ORDER <input type="checkbox"/> BY MANUFACTURER OR AFTER ORDER		
6	<b>Basic Data:</b>			
7	Applicable Standards(1.3):	<input checked="" type="radio"/> NORTH AMERICAN(i.e. ANSI, NEMA) <input type="radio"/> International (i.e. IEC, ISO)		
8	Nameplate Power (2.2.1.1)	<u>3300</u> kW <input checked="" type="checkbox"/>	<u>3600</u> RPM (Synchronous)	
9	<u>4000</u> Volts (2.2.1.2) <input checked="" type="checkbox"/>	<u>3</u> Phase	<u>60</u> Hertz <input checked="" type="checkbox"/>	
10	Motor Power Source:	<input checked="" type="radio"/> SINE WAVE POWER <input type="radio"/> ASD power(Purchaser must confirm details, see page 2 line 14)		
11	Insulation (2.3.1):	<input checked="" type="radio"/> CLASS F <input type="radio"/> Other _____	Temperature Rise (2.3.1)	<input checked="" type="radio"/> CLASS B <input type="radio"/> Other _____
12	Other: _____			
13	Minimum % Overspeed (2.4.5.2.7):	<input checked="" type="radio"/> PER NEMA MG-1 OR IEC 60034-1 <input type="radio"/> Other _____		
14	<b>Site Data (2.1.2)</b>			
15	Ambient Temperature	Max _____ °C	Min <u>10</u> °C	
16	Site Elevation:	<u>611</u> meters	Relative Humidity:	Max _____ %    Min _____ %
17	Motor Location	<input checked="" type="radio"/> Indoor <input type="radio"/> Outdoor	<input type="radio"/> Outdoor with roof	
18	<input checked="" type="radio"/> Dust (2.4.1.2.2,c)	<input type="radio"/> Chemicals(2.1.2)	<input type="radio"/> Cor 2	
19	Area Classification (2.1.7):	<input checked="" type="radio"/> Nonclassified <input type="radio"/> Classified as:	Class _____ Group _____	Division _____ Autoignition Temp _____ °F
20			Class _____ Zone _____	Temperature Code _____
21	Maximum Sound Pressure Level (2.1.3):	<u>85</u> dBA @1m. NO-LOAD, FULL VOLT/FREQ, SINE WAVE POWER <input type="radio"/> Other _____		
22	Seismic Loading (2.4.2.2):	<input checked="" type="radio"/> Nonmassive Foundation (2.4.6.1.2), Description _____		
23	Other: _____			
24	<b>Enclosure (2.4.1.2):</b>			
25	<input type="radio"/> Drip Proof Guarded	<input type="radio"/> Weather kg	<input checked="" type="radio"/> Weather Protected Type II (WPII)	
26	Air Filters (3.5)	<input type="radio"/> Provision Only <input checked="" type="radio"/> Required (3.5.4)	<u>90%, 10 MICRONS</u>	<input type="radio"/> other _____
27		<input type="radio"/> Manufacturer	<input type="radio"/> Type _____	<input type="radio"/> Model _____
28	<input type="radio"/> TEFC	<input type="radio"/> TEPV		
29	<input type="radio"/> TEAAC	Tube Materials (2.4.10.8,a):	<input type="radio"/> Copper Alloy	<input type="radio"/> Stainless Steel
30	<input type="radio"/> TENAC	Redundant Coolers (2.4.1.2.4,b):	<input type="radio"/> Yes	Exchanger Location/Orientation _____
31		Cooling Water Conditions per 2.4.1.2.4.a:	<input type="radio"/> Yes	<input type="radio"/> No (Other) _____
32			GPM _____	
33		Tube Construction (2.4.1.4,d)	<input type="radio"/> Double Tube	
34		<input type="radio"/> Flow Sensor Local Indicator Required	Relay Contacts	<input type="radio"/> No <input type="radio"/> NC
35		<input type="radio"/> Air Temperature Sensor Required (2.4.1.2.4,h)	<input type="radio"/> Type _____	
36		<input type="radio"/> Leak Detection Required	Outer	Type and Description _____
37		<input checked="" type="checkbox"/> High Flow Alarm Set Point _____ GPM	Low Flow Shutdown Set Point _____ GPM	
38		Provision for Pre-Start Purging (2.4.1.1,f)		
39	Degree of Protection IP (2.4.1.2.1)	IP _____	Method of Cooling IC (2.4.2.6)	_____
40	Other _____			
41	<b>Mounting</b>			
42	<input checked="" type="radio"/> Horizontal:	<input type="radio"/> Foot Mounted	<input type="radio"/> Flange Mounted	<input type="checkbox"/> Flange Details _____
43	<input type="radio"/> Vertical:	<input type="radio"/> Shaft Down kg		kg _____
44	<input type="radio"/> Baseplate: Furnished by (2.4.2.6):		<input type="radio"/> Soleplate: Furnished By (2.4.2.6)	_____
45	<input type="radio"/> Epoxy Grout to be Used (2.4.2.7.3):	<input type="checkbox"/> Manufacturer _____	<input type="checkbox"/> Type _____	
46	Other _____			
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				

 <b>American Petroleum Institute</b>	<b>INDUCTION MACHINE</b> <b>API 541 4TH Edition -- DATA SHEETS</b> <b>U.S. CUSTOMARY UNITS</b>	JOB NO. <u>511036</u> ITEM / TAG NO. <u>3A-PM-304A/B/C</u> PURCHASE ORDER NO. <u>511036-300-45-MR-5411-0001</u> REQ / SPEC NO. _____ REVISION NO. <u>3</u> DATE <u>11-20-13</u> BY <u>IAN</u> PAGE <u>2</u> OF <u>6</u>
	<b>GENERAL (CONT.)</b>	
1	NOTE: <input checked="" type="radio"/> DATA SHEET STATUS <input type="radio"/> INDICATES INFO. TO BE COMPLETED BY PURCH.	
2	<input type="checkbox"/> BY MANUFACTURER WITH PROPOSAL <input checked="" type="checkbox"/> BY MANUFACTURER AFTER ORDER <input type="checkbox"/> BY MANUFACTURER OR PURCHASER AS APPLICABLE	
3	<b>Electrical System:</b>	
4	Primary Power Source <u>4160</u> Volts <u>3</u> Phase <u>60</u> Hz    Maximum Ground Fault <u>50</u> Amps	
5	Method of System Grounding <input checked="" type="radio"/> Resistance <input type="radio"/> Reactance <input type="radio"/> Ungrounded <input type="radio"/> Solid	
6	Fault Current at Machine Terminals (3.1.2) <u>220</u> MVA    Fused Starter Let-Through Energy (3.1.2) _____ I <sup>2</sup> (Ampere-squared seconds)	
7	Other _____	
8	<b>Motor Starting (2.2.3)      ACROSS-THE-LINE STARTING AT 80% OF RATED VOLTAGE (2.2.3.1)</b>	
9	<input checked="" type="radio"/> Loaded <input type="radio"/> Unloaded <input type="radio"/> Partially Loaded    _____ %    Starting Torques in Excess of Nema or IEC (2.2.3.1) _____ %	
10	Load Reacceleration Required (2.2.2,b): <input type="radio"/> NO kW <input type="radio"/> YES    Reacceleration Curve No. _____	
11	If yes(2.2.3.4), Complete the following:    Max Voltage Interruption _____ Sec.    Voltage at Motor Terminals _____ volts	
12	Other Starting Method    Type _____    Reduced Voltage _____ volts	
13	Starting Capacity Data(2.2.3.2):    a. Min _____ Volts    at Machine Terminals Under _____ Amps Inrush Current	
14	or b. Min S.C. kVA _____ and _____ X/R ratio and _____ volts at Machine Terminals	
15	<b>Adjustable Speed Drive Conditions:</b>	
16	<input type="radio"/> ASD <input type="radio"/> ASD with DOL Start <input type="radio"/> Bypass @ Utility Frequency	
17	<input type="radio"/> Variable Torque Speed Range:    Min Speed _____ RPM    _____ lb-ft    Max Speed _____ RPM    _____ lb-ft	
18	<input type="radio"/> Constant Torque Speed Range:    Min Speed _____ RPM    Max Speed _____ RPM    _____ lb-ft	
19	<input type="radio"/> Constant Power Speed Range:    Max Speed _____ RPM    _____ HP	
20	Other: _____	
21	<b>Bearings:</b>	
22	Bearing Type: <input type="radio"/> Hydrodynamic(2.4.7.1.1) <input type="radio"/> Antifriction(2.4.7.1.3)	
23	<input type="radio"/> Thrust Bearing(2.4.7.1.5)    Max Driven Equipment Thrust _____    Downthrust    Momentary _____ lbs    Upthrust    Momentary _____ lbs	
24	Continuous _____ lbs    Continuous _____ lbs	
25	<input type="radio"/> Bearing Constant-Level Sight Feed Oilers Required(2.4.7.2.2) <input type="radio"/> Bearing Housing Heaters Required(2.4.8.3)	
26	<input type="radio"/> Special Seals for Gas Purge(2.4.7.3a) <input type="radio"/> Non-Conducting Seals(2.4.7.3,b)	
27	Other: _____	
28	<b>LUBRICATION SYSTEM</b>	
29	SELF-LUBE(2.4.8.1) <input type="radio"/> Pressurized Lube Required(2.4.8.1)    System Supplied By: _____ <input type="radio"/> Common With Driven Equipment	
30	<input type="radio"/> Per API 614(2.4.8.6) <input type="radio"/> Main Oil Pump Required: <input type="radio"/> Integral Shaft Driven <input type="radio"/> Separate (See Line 29)	
31	<input type="radio"/> Oil Rings Not Provided    If Separate: <input type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Type of Drive: <input type="radio"/> Motor <input type="radio"/> Steam Turbine	
32	<input type="radio"/> Standby Oil Pump Required(2.4.8.5): <input type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Type of Drive: <input type="radio"/> Motor <input type="radio"/> Steam Turbine	
33	<input type="radio"/> Turbine Driver: <input type="radio"/> Pressure _____ PSIG <input type="radio"/> Temperature Range _____ °F    to _____ °F	
34	<input type="radio"/> Electric Motor Driver:    Std. No. _____ Encl. _____    HP _____    RPM _____    volts _____    Phase _____    Hz _____	
35	<input type="radio"/> Oil Cooler Required(2.4.7.1.14): <input type="radio"/> Water Cooled <input type="radio"/> Air Cooled <input type="radio"/> Construction Details _____	
36	Type/Viscosity of Oil <u>ISO VG 32 140 to 160 SUS</u> Pressure(2.4.8.4; 2.4.8.5 and 2.4.8.8) <u>1.893 mm<sup>3</sup>/min per BRG @ 137.90 kPA, 1.981 mm dia. Orifice</u>	
37	<input checked="" type="checkbox"/> Beating Oil Requirements(6.1.5):    _____ GPM    _____ PSI <input checked="" type="checkbox"/> Heat Loss to be Removed _____ kW	
38	Oil Viscosity When Common Oil System is Used _____	
39	Antifriction Bearings: <input checked="" type="radio"/> Grease:    Type _____    n/a    Oil Mist(2.4.7.4) <input type="radio"/> Pure Mist <input type="radio"/> Purge Mist	
40	Other: _____	
41	<b>SPECIAL CONDITIONS:</b>	
42	<input type="radio"/> Shaft and Spider one piece forging for 4 or more poles(2.4.5.1.2,b; 2.4.5.1.4)	
43	<input type="radio"/> Special Vibration Requirements(4.3.3.9) _____	
44	<input type="radio"/> Efficiency Evaluation Factckg    _____ \$/kW    applied at _____ % of F.L.	
45	<input type="radio"/> Federal, State, or Local Codes(2.1.7): _____	
46	<input type="radio"/> External Forces on Motor Housing That May Affect Site Performance(2.1.13.2.4.4): _____	
47	Other: _____	

MDS1001304490010-01\_Z22\_000\_0800ln3 di-gep-01 HARTMO 2013-11-20T16:40:30 1.000



INDUCTION MACHINE  
API 541 4TH Edition -- DATA SHEETS  
U.S. CUSTOMARY UNITS

JOB NO. 511036 ITEM / TAG NO. 3A-PM-304A/B/C  
PURCHASE ORDER NO. 511036-300-45-MR-5411-0001  
REQ / SPEC NO. \_\_\_\_\_  
REVISION NO. 3 DATE 11-20-13 BY IAN  
PAGE 3 OF 6

1 MAIN CONDUIT BOX

2 NOTE: DATA SHEET INDICATES INFO. TO BE BY MANUFACTURER BY MANUFACTURER OR  
STATUS COMPLETED BY PURCH. WITH PROPOSAL AFTER ORDER PURCHASER AS APPLICABLE

3 MAIN TERMINAL BOX(3.1):

4  BOX LOCATION NEMA F1 Position CONDUCTOR SIZE \_\_\_\_\_ TYPE \_\_\_\_\_ INSULATION \_\_\_\_\_ QTY. PER PHASE \_\_\_\_\_

5  BUSHING STUDS OR RECEPTACLES(3.1.6,h)  TERMINATIONS AND INTERIOR JUMPERS:  INSULATED  NON-INSULATED

6  SPACES FOR STRESS CONES(3.1.6,g)  TOP  BOTTOM  DRIVE SIDE  NON-DRIVE END SIDE

7  SPACE HEATERS(3.1.6,b):  TEMP. CODE \_\_\_\_\_  THERMAL INSULATION(3.1.6a) \_\_\_\_\_ VOLTS \_\_\_\_\_ PHASE \_\_\_\_\_ n/a kw

8  DIFFERENTIAL PROTECTION CURRENT TRANSFORMERS(3.1.6,j; 3.1.8; 3.6.3):  ACCURACY CLASS C20  RATIO 50:5 A  Quantity 3

9 TYPE:  CORE BALANCE  SUPPLIED BY \_\_\_\_\_  MOUNTED BY \_\_\_\_\_

10  SURGE CAPACITORS(3.1.6,i; 3.6.2.1):  MICRO FARADS \_\_\_\_\_  SUPPLIED BY \_\_\_\_\_  MOUNTED BY \_\_\_\_\_

11  SURGE ARRESTERS(3.1.6,i; 3.6.2.2):  kV RATED \_\_\_\_\_ kw \_\_\_\_\_  SUPPLIED BY \_\_\_\_\_  MOUNTED BY \_\_\_\_\_

12  CURRENT TRANSFORMERS(3.1.6,j) FOR AMMETER  ACCURACY CLASS \_\_\_\_\_  RATIO \_\_\_\_\_  QUANTITY \_\_\_\_\_

13  SUPPLIED BY \_\_\_\_\_  MOUNTED BY \_\_\_\_\_

14  POTENTIAL TRANSFORMERS(3.1.6,i) FOR VOLTMETER  ACCURACY CLASS \_\_\_\_\_  RATIO \_\_\_\_\_  QUANTITY \_\_\_\_\_

15  FUSES REQUIRED  SUPPLIED BY \_\_\_\_\_  MOUNTED BY \_\_\_\_\_

16  PRESSURE WITHSTAND CAPABILITY(3.1.2)  DRAINS(3.1.6,c)  BREATHERS(3.1.6,d)  PROVISIONS FOR PURGING(3.1.6,e)

17  REMOVABLE LINKS(3.1.6,f)  SILVER OR TIN-PLATED BUS JOINTS(3.1.6,k)  GROUND BUS(3.1.6,m)

18 OTHER: \_\_\_\_\_

19 ACCESSORIES

20  FRAME SPACE HEATERS(3.4):  TEMP CODE 200  SHEATH MATERIAL \_\_\_\_\_ 120/240 VOLTS 1 PHASE  0.800 KW

21  BEARING HEATERS(2.4.8.3): \_\_\_\_\_ VOLTS \_\_\_\_\_ PHASE \_\_\_\_\_ KW

22  WINDING TEMPERATURE DETECTORS(3.2.1): TWO PER PHASE, 3 WIRE PLATINUM, 100 OHMS AT 0°C GROUND ONE COMMON LEAD(3.2.1.2)

23  OTHER DETECTOR: QTY/PHASE \_\_\_\_\_ TYPE \_\_\_\_\_ MATERIAL \_\_\_\_\_ WIRES \_\_\_\_\_

24  RECOMMENDED SETTINGS ALARM 155 °C  SHUTDOWN 175 °C

25  HYDRODYNAMIC & THRUST BEARING TEMPERATURE DEVICES(3.3):  INSTALL PER API 670

26  RTDs QTY/BRG. 1 TYPE 100 Ohm MATERIAL Platinum WIRES 3  GROUND ONE COMMON LEAD(3.2.1.2)

27  THERMOCOUPLE: QTY/BRG. \_\_\_\_\_ TYPE \_\_\_\_\_ MATERIAL \_\_\_\_\_ WIRES \_\_\_\_\_

28  DIAL TYPE THERMOMETERS(2.4.7.1.16): TYPE \_\_\_\_\_  ALARM CONTACTS \_\_\_\_\_ NUMBER OF CONTACTS \_\_\_\_\_  NO  NC

29 LOCATION OF BEARING TEMPERATURE SENSOR WIRE TERMINATIONS:  TERMINAL BOX AT MOTOR SIDE  STATOR RTD BOX  CONDUIT HEAD AT BEARING

30  RECOMMENDED SETTINGS ALARM 100 °C  SHUTDOWN 105 °C

31  VIBRATION DETECTORS(3.8): INSTALLED QTY/BEARING:  TWO(3.8.1)  FOUR(3.8.1)

32  PHASE REFERENCE PROBE(3.8.1)  PROVISIONS ONLY  INSTALLED

33  PROBE, OSCILLATOR-DEMODULATOR MFR. \_\_\_\_\_ MODEL/SERIES \_\_\_\_\_

34  PROBE SUPPLIED BY \_\_\_\_\_ INSTALLED BY \_\_\_\_\_ OSC-DEMOM. FURNISHED BY \_\_\_\_\_ INSTALLED BY \_\_\_\_\_

35  BEARING HOUSING SEISMIC SENSORS(3.8.3)  PROVISIONS ONLY  INSTALLED  SENSOR TYPE \_\_\_\_\_ SENSOR MFR. \_\_\_\_\_

36 QTY./D.E. BEARING \_\_\_\_\_ LOCATION (H,V,A) \_\_\_\_\_ QTY./N.D.E. BEARING \_\_\_\_\_ LOCATION (H,V,A) \_\_\_\_\_

37  SENSOR SUPPLIED BY \_\_\_\_\_

38 LOCATION OF VIBRATION SENSOR WIRE TERMINATIONS:  TERMINAL BOX AT MOTOR SIDE  WITHIN STATOR HOUSING  OTHER \_\_\_\_\_

39  ALARM AND CONTROL SWITCHES(3.6.1): DC RATED CONTACTS: \_\_\_\_\_

40  PARTIAL DISCHARGE DETECTORS(3.4.6) YES DESCRIBE REQUIRED SYSTEM: \_\_\_\_\_

41 \_\_\_\_\_

42 SEPERATELY POWERED AUXILIARY FAN(S): DRIVER INFORMATION (WHERE APPLICABLE)

43 QUANTITY \_\_\_\_\_ LOCATION \_\_\_\_\_ ENCL. \_\_\_\_\_ HP \_\_\_\_\_ RPM \_\_\_\_\_ VOLTS \_\_\_\_\_ PHASE \_\_\_\_\_ Hz

44 QUANTITY \_\_\_\_\_ LOCATION \_\_\_\_\_ ENCL. \_\_\_\_\_ HP \_\_\_\_\_ RPM \_\_\_\_\_ VOLTS \_\_\_\_\_ PHASE \_\_\_\_\_ Hz

45 OTHER: \_\_\_\_\_

46 \_\_\_\_\_

47 \_\_\_\_\_

48 \_\_\_\_\_

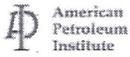
49 \_\_\_\_\_

50 \_\_\_\_\_

51 \_\_\_\_\_

52 \_\_\_\_\_

53 \_\_\_\_\_

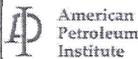


INDUCTION MACHINE  
API 541 4TH Edition -- DATA SHEETS  
U.S. CUSTOMARY UNITS

JOB NO. 511036 ITEM / TAG NO. 3A-PM-304A/B/C  
PURCHASE ORDER NO. 511036-300-45-MR-5411-0001  
REQ / SPEC NO. \_\_\_\_\_  
REVISION NO. 3 DATE 11-20-13 BY IAW  
PAGE 4 OF 6

R  
E  
V

1	GENERAL	
2	NOTE: <input checked="" type="radio"/> DATA SHEET STATUS	<input type="radio"/> INDICATES INFO. TO BE COMPLETED BY PURCH.
3	DRIVEN EQUIPMENT INFORMATION	
4	DRIVEN EQUIPMENT: Tag No. <u>3A-PM-304A/B/C</u>	Description <u>HP BFW PUMP</u> Location _____
5	TYPE OF LOAD: Centrifugal: <input type="radio"/> Compressor <input checked="" type="radio"/> Pump <input type="radio"/>	Positive Displacement: <input type="radio"/> Reciprocating Compressor <input type="radio"/>
6	Other: <input type="radio"/> Description: _____	
7	DRIVEN EQUIPMENT MFR. _____	Type/Model No. _____ RPM _____
8	LOAD SPEED-TORQUE CURVE NO. (2.2.2a) _____	Crank-Effort Chart or Torque-Effort Curve No. (6.1.4g) _____
9	TOTAL DRIVEN-EQUIPMENT WK2 (2.2.2c) _____	lb-ft <sup>2</sup> at _____ RPM
10	DRIVER CONNECTION TO LOAD: <input type="radio"/> Direct CouplkW	<input type="radio"/> V-Belt Connection <input type="radio"/> Through Gearbox
11	MOTOR SHAFT EXTENSION(2.4.5.1.9): <input type="radio"/> Cylindrical Fit	<input type="radio"/> Taper Fit <input type="radio"/> Flange
12	ROTATION VIEWED FROM OPPOSITE DRIVE END OF MOTOR: <input type="radio"/> Clockwise	<input type="radio"/> Counterclockwise <input type="radio"/> Bi-Directional
13	COUPLING(2.4.9): Type _____	Mfr _____ Type/Model _____
14	SUPPLIED BY: <input type="radio"/> Motor Mfr <input type="radio"/> Driven Equipment Mfr	<input type="radio"/> Purchaser <input type="radio"/> Others
15	MOUNTED BY: <input type="radio"/> Motor Mfr <input type="radio"/> Driven Equipment Mfr	<input type="radio"/> Purchaser <input type="radio"/> Others
16	OTHER: _____	
17	MISCELLANEOUS	
18	<input type="radio"/> PROOF OF NONSPARKING, CORROSION-RESISTANT FAN(2.4.10.6)	<input checked="" type="radio"/> Quantity of Special Tools Required(2.1.11; 2.4.2.14) <u>ONE SET</u>
19	<input type="radio"/> SPECIAL LOW-TEMP MATERIAL REQUIREMENTS(2.4.10.4)	_____
20	<input type="radio"/> SPECIAL WINTERIZING REQUIREMENTS(6.1.16)	_____
21	<input type="radio"/> MATERIALS TO BE IDENTIFIED WITH ANSI, ASTM, AISI, ISO, OR ASME NUMBERS(6.1.19)	_____
22	<input type="radio"/> TYPICAL DRAWINGS AND LITERATURE WITH PROPOSAL	<input type="radio"/> Electronic Instruction Manuals (6.1.19) <input type="radio"/> Photos showing assembly steps required (6.2.4.5)
23	<input type="radio"/> SPECIAL IDENTIFICATION WITH TRANSMITTALS(6.2.1.2,e)	<input type="radio"/> Separate Nameplate with Purchaser's Information(2.4.11.4)
24	SHIPMENT: <input type="radio"/> Domestic <input type="radio"/> Export Boxing Required <input type="radio"/> Commissioning Assistance Required(6.1.18)	
25	OTHER: _____	
26	MOTOR DATA - FIRST SECTION	
27	MANUFACTURER <u>SIEMENS</u>	Type/Model No. _____ CGII _____ Frame Size/Designation <u>6813</u>
28	QTY. <u>3</u>	<u>3300</u> kW <u>3600</u> RPM(Syn.) <u>2</u> Poles <u>4000</u> Volts <u>3</u> Phase <u>60</u> Hz
29	SERVICE FACTOR <u>1.0</u>	INSULATION CLASS <u>F-VPI</u> TEMPERATURE RISE <u>85 RTD@1.05F</u> ENCLOSURE _____
30	FULL LOAD SPEED <u>3581</u> RPM	FULL-LOAD TORQUE (FLT) <u>897.28</u> kg-m ROTOR WK <sup>2</sup> (6.1.4.1,c) <u>23.304</u> kg-m <sup>2</sup> @FLRPM
31	LOCKED ROTOR TORQUE (LRT) <u>60</u> % FLT	PULL-UP TORQUE (PUT) <u>60</u> % FLT BREAKDOWN TORQUE (BDT) <u>196</u> % FLT
32	LOAD POINT <u>50%</u>	<u>75%</u> <u>100%</u> <input type="radio"/> OTHER: _____ %
33	EFFICIENCY <u>96.1</u>	<u>96.5</u> <u>96.4</u> <input type="radio"/> GUAR. EFF. @ _____ % LOAD = _____
34	POWER FACTOR <u>83.4</u>	<u>87.5</u> <u>88.3</u> <input type="radio"/> TEST METHOD <u>IEEE Method 12</u>
35	CURRENT <u>297.2</u> AMPS	<u>423.2</u> AMPS <u>559.7</u> AMPS _____ AMPS
36	MOTOR SPEED-TORQUE CURVE NO. _____	MOTOR SPEED-CURRENT CURVE NO. _____ n/a
37	MOTOR SPEED-POWER FACTOR CURVE NO. _____	FOR CURRENT-PULSATATION OPERATING COND. (6.1.4,g) _____ n/a % PULSATATION
38	OTHER: <u>100%</u>	<u>80%</u>
39	LOCKED-ROTOR CURRENT <u>3140</u> AMPS	<u>2475.2</u> AMPS LOCKED ROTOR PF <u>12.8</u>
40	LOCKED-ROTOR WITHSTAND TIME, COLD <u>10</u> SEC.	<u>17</u> SEC. MAX SOUND PRESSURE LEVEL(2.1.3) <u>83</u> dBA @ 1 m no-load
41	LOCKED-ROTOR WITHSTAND TIME, RATED TEMP <u>8</u> SEC.	<u>14</u> SEC.
42	WEIGHTS: NET <u>2866.7</u> kg	STATOR <u>2394.5</u> kg ROTOR <u>472.2</u> kg SHIPPING _____ kg
43	OTHER: _____	
44	_____	
45	_____	
46	_____	
47	_____	
48	_____	
49	_____	
50	_____	
51	_____	
52	_____	



INDUCTION MACHINE  
API 541 4TH Edition -- DATA SHEETS  
U.S. CUSTOMARY UNITS

JOB NO. 511036 ITEM / TAG NO. 3A-PM-304A/B/C  
PURCHASE ORDER NO. 511036-300-45-MR-5411-0001  
REQ / SPEC NO. \_\_\_\_\_  
REVISION NO. 3 DATE 11-20-13 BY IAN  
PAGE 5 OF 6

R  
E  
V

1	MOTOR DATA - SECOND SECTION					
2	NOTE:	DATA SHEET INDICATES INFO. TO BE	BY MANUFACTURER	BY MANUFACTURER	BY MANUFACTURER OR	
		STATUS COMPLETED BY PURCH.	WITH PROPOSAL	AFTER ORDER	PURCHASER AS APPLICABLE	
3	BEARINGS					
4	BEARING, DRIVE END:	CAPABLE OF SELF LUBE: <u>Yes</u>	MFG: <u>Siemens</u>	TYPE: <u>Sleeve</u>	MODEL/PART NO.:	<u>58-454-205-501</u>
5	BORE DIAMETER:	MIN: <u>76.200</u> mm	MAX: <u>76.2254</u> mm	BORE LENGTH:	<u>101.092</u> mm	
6	DESIGN CLEARANCE WITH SHAFT:	MIN: <u>0.127</u> mm	MAX: <u>0.1778</u> mm	BEARING LOADING:	_____ PSI	
7	BRG, NON-DRIVE END:	CAPABLE OF SELF LUBE: <u>Yes</u>	MFG: <u>Siemens</u>	TYPE: <u>Sleeve</u>	MODEL/PART NO.:	<u>58-454-205-501</u>
8	BORE DIAMETER:	MIN: <u>76.200</u> mm	MAX: <u>76.2554</u> mm	BORE LENGTH:	<u>101.092</u> mm	
9	DESIGN CLEARANCE WITH SHAFT:	MIN: <u>0.127</u> mm	MAX: <u>0.1778</u> mm	BEARING LOADING:	_____ PSI	
10	THRUST BEARING:	<input type="checkbox"/> NON-DRIVE END	MANUFACTURER: _____	TYPE: _____	MODEL/PART NO.:	_____
11		<input type="checkbox"/> DRIVE END	kw _____		BEARING LOADING:	_____ PSI
12	OTHER: _____					
13	INDUCTION MOTOR EQUIVALENT CIRCUIT DATA:					
14	<u>3878</u>	KVA BASE AT RATED VOLTAGE AND 77 °F	SUBTRANSIENT REACTANCE X"D:		<u>0.1795</u>	
15	TOTAL WINDING CAPACITANCE TO GROUND: _____ uF					
16	LOCKED ROTOR AT RATED VOLTAGE:	STATOR R: <u>0.0061</u>	ROTOR R: <u>0.0194</u>	MAGN R:	<u>n/a</u>	
17		STATOR X: <u>0.1368</u>	ROTOR X: <u>0.0723</u>	MAGN X:	<u>n/a</u>	
18	RATED LOAD AT RATED VOLTAGE:	STATOR R: <u>0.0061</u>	ROTOR R: <u>0.0054</u>	MAGN R:	<u>4.287</u>	
19		STATOR X: <u>0.1368</u>	ROTOR X: <u>0.1072</u>	MAGN X:	<u>4.287</u>	
20	RESIDUAL VOLTAGE OPEN-CIRCUIT TIME CONSTANT:	MOTOR ONLY: <u>2.122</u> SEC				
21		MOTOR WITH SURGE CAPACITORS: <u>n/a</u> SEC				
22	PHASE-TO-PHASE RESISTANCE:	<u>0.03914</u> OHM, @ <u>77</u> °F				
23	OTHER: _____					
24	STATOR AND ROTOR WINDING REPAIR DATA					
25	STATOR COIL INFORMATION:					
26	TOTAL COPPER WEIGHT:	<u>563.36</u> kg	COPPER STRAND SIZE: <u>3.509 x 9.999</u> mm	INSULATION:	<u>Mica</u>	
27	NUMBER OF STRANDS PER COIL TURN:	<u>2</u>	TURN INSULATION DESCRIPTION:	<u>Mica Tape</u>		
28	NUMBER OF TURNS PER COIL:	<u>5</u>	COIL GROUND-WALL INSULATION DESCRIPTION:	<u>2.5908</u> mm		
29	COIL CONFIGURATION:	<u>1</u>	ROWS BY: <u>2</u>	COLUMNS	_____	
30	FINISHED COIL DIMENSION IN SLOT REGION, W x H x L (ALSO GIVE TOLERANCES):	<u>13.0556 x 41.6052 x 1417.32</u> mm				
31	TOTAL NUMBER OF STATOR SLOTS:	<u>54</u>				
32	SLOT FILLER DESCRIPTION - THICKNESS:	TOP: <u>0</u>	SIDE: <u>0</u>	BETWEEN TOP-BOTTOM COILS:	<u>2.9972</u> mm	
33	STATOR BORE DIAMETER:	<u>444.5</u> mm	WINDING THROW	<u>1-18</u>	WINDING CONNECTION:	<u>2 circuit Wye</u>
34	SPECIAL END-TURN BRACING:	<u>Heavy Duty Bracing</u>				
35	COIL DIMENSION DRAWING NO.:	<u>51-009-404-000</u>				
36	OTHER: _____					
37	ROTOR CAGE INFORMATION:					
38	TOTAL COPPER WEIGHT:	<u>150.14</u> kg	BAR SIZE: <u>6.35 x 44.45</u> mm	CONDUCTOR MATERIAL:	<u>CDA 110</u>	NO. OF BARS: <u>64</u>
39	RETAINING RING ALLOW, IF APPLICABLE:	_____				
40	RING MATERIAL:	<u>CDA 110</u>	RING DIMENSIONS PRE-MACHINING:	<u>OD 410.67 / ID 292.100 mm Width 67.31</u> mm		
41	OTHER: _____					
42	MISCELLANEOUS					
43	_____					
44	_____					
45	_____					
46	_____					
47	_____					

