

(METRIC UNITS)

JOR

DATA SHEET

RECIPROCATING COMPRESSOR

JOB 477354 ITEM NO 011K101ABC  
PAGE NO. 1 OF 10 BY RMV IR  
DATE 8/13/81 REV. 4

Applicable To:  Proposals  Purchase  As Built  
For Pertamina - Cilacap Refinery Exp. Purchase Order No. 477804-4030 Date: \_\_\_\_\_  
Site Cilacap, Java, Indonesia Unit Crude Distillation  
Service Crude Column Gas No. Req'd 3 (2-60% + 1-Spec)  
NOTE:  Indicates Information To Be Completed By Purchaser  By Manufacturer  GENERAL

Manufacturer Ingersoll-Rand Serial No. \_\_\_\_\_  
Type 16 x 16 x 9 HSE-1 RPM: Max. 514 Rated 490 Min. \_\_\_\_\_  
Compressor Throats: No. Furnished 2 Max. No. Possible 2 Max. Frame KW 300 Max. RPM 286 Rated RPM \_\_\_\_\_  
Driver Type Ind. motor Driver Rated KW 186.5 RPM 500 Driver Furn. By  Compr. Mfr.,  \_\_\_\_\_

RATED OPERATING CONDITIONS ( EACH MACHINE )

APPLICABLE SPECIFICATIONS

Service/Item No. 011K101 2061 6 J 833  
Stage Single  
Gas Compressed \_\_\_\_\_  
Corrosive Due To HC mix  
Trace HCl  
Relative Humidity \_\_\_\_\_  
Mol. Wgt., At Intake \_\_\_\_\_  
Co/Cv Value At Suction 1.093  
Co/Cv Value At Discharge 1.093  
Inlet Temp. °C 49  
Inlet Pressure,  $Kg/cm^2$  Abs 1.53  
Min. ΔP Between Stgs. bar \_\_\_\_\_  
Actual Disch. Temp. °C 87.2  
Discharge Press.  $Kg/cm^2$  Abs 5.28  
Z @ Suction 0.971  
Z @ Discharge 0.93

API Recip. Compr. Spec. 618  
 Fluor SP-477804-43-4  
 " SP-477804-43-7  
 " SP-477804-46-11

ACCESSORIES

COMP. MFR SHALL FURNISH:

Pulsation (Dampers) (Valves-Blocked)  
For Inlet + Discharge  
 Interstage Piping & Relief Valves  
 Moisture Separator W/Traps  
 Thermosiphon  
 Cylinder Cooling Water Piping, Single  
Inlet - Outlet Manifold W/Valves  
 Self Contained Closed Coolant System  
 Intercoolers W/Cooling Water Piping  
Single Inlet - Outlet Manifold W/Valves

EXPECTED ( Capacity Tolerance ±3%; KW Tolerance ± 3% )

Kg/Hr. Wet \_\_\_\_\_  
Inlet  $m^3$ /HR (Corrected) 2165.13  
 $Nm^3$ /HR (1 at m. & 0°C) 2762  
KW/Stage \_\_\_\_\_  
Total KW (Wet Basis) 151

WEIGHTS AND DIMENSIONS

Max. Erection Weight kg \_\_\_\_\_  
Max. Maintenance Weight kg \_\_\_\_\_  
Total Wt., Less Driver & Gear, kg 3990 kg  
Approx. Floor Space mm  
L 5790 W 1220 H 2135  
Rod Removal Distance 9150 mm

♦♦ RATED PER API ( Capacity Tolerance -0%; KW Tolerance +0% )

Kg/Hr. Wet \_\_\_\_\_  
Inlet  $m^3$ /HR (Corrected) \_\_\_\_\_  
 $Nm^3$ /HR (1 at m. & 0°C) 2679  
KW/Stage \_\_\_\_\_  
Total KW (Wet Basis) 156  
Total KW Required By Driver (Wet Basis) 156

CAPACITY CONTROL

Stage - % Capacity	92	84	75	50
Inlet $m^3$ /HR	2040	1860	1660	1110
Pockets/Valves Open*	1/HF	2/HF	1/HS	2/HS
Inlet Pressure, $Kg/cm^2$ Abs	1.53	1.53	1.53	1.53
Discharge Pressure, $Kg/cm^2$ Abs	5.28	5.28	5.28	5.28
Actual Disch. Temp. °C	87.2	87.2	87.2	87.2
Power KW	139	128	116	80
Actual Rod Load, T	2105			4970
Actual Rod Load, C	3080			2175
Degrees Rod Reversal	140			80
	D.A.M./POCKET OPEN			SAFE

Capacity Control Shall Be By:

Variable Speed To \_\_\_\_\_ % Rated  
 Purchaser's By-Pass  
 Mfr. Standard Automatic Control  
 Start/Stop  (2)(3)(5) Step  
 Piloted By Rec. Press.  
 Piloted By Purch. Instr.  
W/ \_\_\_\_\_ BARG Air Signal  
 Clearance Pockets, H, EA Cyl.  
 Fixed  Variable  
 Manual  Manual Pneu.  Auto  
 Suct. Valve Unloaders, EA Cyl.  
Type:  Plug  Finger  \_\_\_\_\_  
 Manual  Manual Pneu.  Auto

REMARKS: 1) clear Pockets on head end  
2) Suct. Valve unloaders on both ends  
of each cyl.

TO - INFORMATION ONLY FLUOR  
Berlaku s/d 14 Dec 2015, setelah masa berlaku habis mohon dihapuskan  
Downloaded by 2015-11-15 15:52 by Prasetyo Widagdo  
CONTRACTOR/VENDOR OF IT'S RESPONSIBILITY OR LIABILITY UNDER THE CONTRACT/PURCHASE ORDER  
Shall 100-96.243 (dagdo)

\*S = SUCTION VALVE UNLOADERS H = HEAD END C = CRANK END F = FIXED POCKET OPEN V = VAR. POCKET OPEN

(METRIC  
UNITS)



DATA SHEET

# RECIPROCATING COMPRESSOR

JOB. 477309 ITEM NO. 211K101A3  
PAGE 2 OF 10 BY RWV IRS  
DATE 8/13/81 REVISION 4

GAS ANALYSIS		RATED OPERATING CONDITIONS				REMARKS
<input checked="" type="checkbox"/> Mol %	<input type="checkbox"/> M.W.					
Air	28.966					
Oxygen	32.000					
Nitrogen	28.016					
Water Vapor	18.016	6.88				
Carbon Monoxide	28.010					
Carbon Dioxide	44.010					
Hydrogen Sulfide	34.076	TR				
Hydrogen	2.016					
Methane	16.042					
Ethylene	28.052					
Ethane	30.068	1.45				
Propylene	42.078					
Propane	44.094	39.72				
i-Butane	58.120	8.84				
n-Butane	58.120	18.51				
i-Pentane	72.146	8.82				
n-Pentane	72.146	6.63				
Hexane Plus		9.15				
HCl		TR				
Total		100				
Avg. Mol. Wt.		54.7				

SKETCH :

NON LUBRICATED PISTON RIDER RING DATA

Stage					
Piston Rider Ring					
Quantity					
Width mm					
Allowable Wear mm					

BEARING DATA

	QUANTITY	ACT. LOAD, Bar	RATED LD. Bar	DIAMETER, mm	LENGTH, mm	MATERIAL
Main Bearing - Plain				142.9 OD	134.9	ALUM
Main Bearing - Thrust						
Crankpin Bearing				152.4 OD	101.6	ALUM
Crosshead Pin Bearing in Connecting Rod				120.7 OD	106.4	BRONZE
Crosshead Pin Bearing in Crosshead						
				DIAMETER, mm	LENGTH, mm	WIDTH, mm
Crosshead Shoe				279.4	222.25	158.75

PIPING RESPONSE DATA

Vendor Analog Study Required  
 Analog To Consider: (For both Single & Double Acting) :  100%  75%  50%  25%  
 Load Each Machine  
 3 Machines Operating in Parallel

Vendor Mechanical Response  
 of Piping Required (M8N8/ review)

477809-4-0302-01--25-1

METRIC  
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DATA SHEET  
RECIPROCATING COMPRESSOR

Q. 477304 ITEM NO. 01K101AE  
PAGE NO. 3 of 10 BY RWV IR Co  
DATE 8/13/81 REV. 4

CYLINDER DATA

Item No./Service	01K
Stage	1
No. Of Cyl. Per Stage	2
Type Cyl. Cooling Req'd.	Thermosyphon
Type Cyl. (Step) (Tandem)	Valve in Barrel
Single/Double Acting	DA
Cylinder Liner Yes/No	YES
Cylinder Liner Wet/Dry	DRY
Outside Diam. Liner, mm	432
Bore, mm	406
Stroke, mm	229
Piston Displacement, M <sup>3</sup> /HR	1728
Clearance, %	12.5
Volumetric Efficiency, %	69.1
API Valve Gas Velocity, M/S	14.7
No. Inlet/Disch. Valves/Cyl.	6/6
Type of Valves	CHANNEL
Inlet/Disch. Valve Lift, Mills	.119/.119
Max. Allow. Piston Speed, M/S	3.9
Normal Piston Speed, M/S	3.7
Rod Diameter, mm	51
Max. Allow. Rod Loading T	9525
Max. Allow. Rod Loading C	9525
Actual Rod Load, T (Gas Load)	4990
Actual Rod Load, C (Gas Load)	4850
Actual Rod Load, T (Gas & Inertial)	2610
Actual Rod Load, C (Gas & Inertial)	2835
Degrees Rod Reversal	155
Max. Allow. Cyl. Press., kg/cm <sup>2</sup>	5.6
Max. Allow. Cyl. Temp., °C	176.7
Recom. Relief Valve, kg/cm <sup>2</sup>	5.6
Hydrostatic Test, kg/cm <sup>2</sup>	8.44
Suction Size/Rating	203.2/1506 (8"-150")
Facing	100-150 AARK EF
Disch. Size/Rating	203.2/1506 (8"-150")
Facing	100-150 AARK EF
Position From Driver End *	

COMPRESSOR PACKING

Full Floating Vented Packing  
W/Stainless Steel Springs \_\_\_\_\_  
 Forced Feed Lubricated \_\_\_\_\_  
 Non-Lubricated Teflon Carbon \_\_\_\_\_  
 Water Cooled \_\_\_\_\_  
 Provisions For Future (Water) (Oil)  
Cooling \_\_\_\_\_  
 Vented To Suction, rated for cyl design press

DISTANCE PIECE

Standard \_\_\_\_\_  
 Extra Long Single Compartment \_\_\_\_\_  
 Two Compartment \_\_\_\_\_  
 Solid Cover \_\_\_\_\_  
 Vented To Atmos. Design Press. LB kg/cm<sup>2</sup>

COMPRESSOR MATERIALS

Cylinders	CAST IRON
Cylinder Liners	NI RESIST
Pistons	CAST IRON p / FAB STEEL
Piston Rings	Teflon
Rider Rings	
Piston Rods	SAE 410 13% Chrome 16 RMS
Piston Rod Hard (Rockwell "C")	35-40
Valve Seats/Seat Plate	CAST IRON / 420 STAINLESS
Valve Stools	CAST IRON
Channels	40 STAINLESS STEEL
Valve Springs	410 STAINLESS STEEL
Rod Packing	Teflon w/ stainless spring
Main Bearings	ALUM
Crank Pin Bearing	ALUM
Cross Head Bearing C.R.	BRONZE
Cross Head Bearing C.H.	
Cross Head	CAST STEEL
Cross Head Shoes	ALUM

LUBRICATION

FRAME

Splash System  
 Pressure System INCLUDE THE FOLLOWING:  
 Main Oil Pump Driven By (Comp. Shaft) \_\_\_\_\_  
 Aux. Oil Pump Driven By Electric Motor  
 Hand Operated Pump For Starting  
 Separately Packaged Lube System  
Type Main Bearings  Sleeve  Roller  
 Outboard Bearing Included

CYLINDERS

Non Lubricated  
Lubricator Driven By:  
 Compressor Shaft  Electric Motor  Chair  
Type Lubricator  Single Plunger/Feed  
 Divider Block  
 Lubricator Make MADISON-KIRK Model \_\_\_\_\_  
 No. Of Comp. \_\_\_\_\_  
 No. Of Spare Lubricator plungers - 1 mt.

Barring Device  Manual  Pneu.

Coupling - Low Speed  
Mfr. THOMAS Model CMR 550

Type FLEXIBLE DISK

Coupling - High Speed  
Mfr. \_\_\_\_\_ Model \_\_\_\_\_

Type \_\_\_\_\_

Coupling - (Main) (Aux) Oil Pump. \_\_\_\_\_  
Mfr. THOMAS Model \_\_\_\_\_

Type FLEXIBLE DISK

Type Guards  Code  Standard  Non-Spark  
 Static Cond. V. Belts  Tot. Encl. V-Belt Grd.

REMARKS: Lube oil system to include dual filters to be mounted on sole plate with aux oil pump.

477304-4-0-22-01-25-1

\* DR FLYWHEEL

RH = RIGHT HAND

LH = LEFT HAND

OB = OUTBOARD

IB = INBOARD

(METRIC UNITS)

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DATA SHEET  
RECIPROCATING COMPRESSOR

JOB NO. 4773-9 ITEM NO. LIKIDIAK  
PAGE NO. 4 of 10 BY. RWV. IRC  
DATE 8/13/81 REV. 4

SITE DATA

Altitude 4 M Barometer 1.03 kg/cm<sup>2</sup>  
 Design Temp. °C 33 Summer 21 Winter Min.  
 Design Wet Bulb Temp. °C \_\_\_\_\_  
 Winterization Req.  Tropicalization Req.  
 Unusual Conditions:  Dust  Fumes  
 Other Fungus  
**EQUIPMENT SHALL BE SUITABLE FOR**  
 Indoors  Heated  Unheated  
 Outdoors  Under Roof  Without Roof  
 Electrical Equipment Hazard Class 1 Gr. D Div. 2  
**COOLING WATER FOR COMP. CYLINDERS:**  
 Type Water NONE  
 Press. Barg \_\_\_\_\_ Supply \_\_\_\_\_ Return Min. \_\_\_\_\_  
 Temp. °C \_\_\_\_\_ Supply \_\_\_\_\_ Return Max. \_\_\_\_\_  
**COOLING WATER FOR (OIL COOLER)(INTERCOOLERS)(ROD PKG.):**  
 Type Water NONE  
 Press. PSIG \_\_\_\_\_ Supply 1 Return Min. \_\_\_\_\_  
 Temp. °C \_\_\_\_\_ Supply \_\_\_\_\_ Return Max. \_\_\_\_\_  
**ELECTRIC POWER FOR HEATERS: NONE**  
 \_\_\_\_\_ Volts \_\_\_\_\_ Phase \_\_\_\_\_ Hertz  
**STEAM FOR HEATERS:**  
 Normal: \_\_\_\_\_ Barg @ \_\_\_\_\_ °CTT  
 Max.: \_\_\_\_\_ Barg @ \_\_\_\_\_ °CTT  
**INSTRUMENT AIR SUPPLY:**  
 Press. 1 kg/cm<sup>2</sup> 10.5 Max. 7.5 Normal 5.6 Min.

UTILITY CONSUMPTION

ELECTRIC	KW	Locked Rotor Amps	Full Load Amps
Main Driver	<u>186.5</u>	_____	_____
Main Lube Oil Pump	<u>(shaft)</u>	_____	_____
Aux. Lube Oil Pump	<u>1.5 HP</u>	_____	_____
Pkg. Coolant Oil Pump	_____	_____	_____
Mech. Lubricator	_____	_____	_____
Frame Oil Heater	_____ Watts _____ Volts _____ Hz	_____	_____
Lubricator Heater	_____ Watts _____ Volts _____ Hz	_____	_____
Space Heater	_____ Watts _____ Volts _____ Hz	_____	_____
_____	_____ Watts _____ Volts _____ Hz	_____	_____
<b>STEAM</b>			
Main Driver	_____ Kg/HR _____ Barg _____ °CTT to _____ Barg	_____	_____
Lubr. Heater	_____ Kg/HR _____ Barg _____ °CTT to _____ Barg	_____	_____
Frame Heater	_____ Kg/HR _____ Barg _____ °CTT to _____ Barg	_____	_____
_____	_____ Kg/HR _____ Barg _____ °CTT to _____ Barg	_____	_____
<b>COOLING WATER</b>			
Quantity m <sup>3</sup> /HR	Comp. Cyl. Jkts. _____	Rod Pkg. _____	L.O. Cooler _____
Inlet Temp., °C	_____	_____	_____
Outlet Temp., °C	_____	_____	_____
Inlet Press., Barg	_____	_____	_____
Outlet Press., Barg	_____	_____	_____
Max. Press., Barg	_____	_____	_____
Total C.W., m <sup>3</sup> /HR	_____	_____	_____

INSPECTION AND SHOP TESTS

	REQUIRED	WITNESSED
Shop Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mfr. Standard Shop Tests	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Valve Leak Test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cyl. Hydro. Test	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hydro. Cyl. Water Jkts. <u>4.2 kg/cm<sup>2</sup></u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cyl. Helium Leak Test @ MWP	<input type="checkbox"/>	<input type="checkbox"/>
Bar Over To Check Runout, Etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mech. Run Test W/Shop Driver	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mech. Run Test W/Job Driver	<input type="checkbox"/>	<input type="checkbox"/>
Aux. Equip. Oper. Test	<input type="checkbox"/>	<input type="checkbox"/>
Dismantle - Reassemble Inspection	<input type="checkbox"/>	<input type="checkbox"/>
Kerosene Leak Test	<input type="checkbox"/>	<input type="checkbox"/>

PAINTING

Manufacturer's Standard  
 Other \_\_\_\_\_

SHIPMENT

Domestic  Export  Export Boxing Req.  
 Outdoor Storage Over 6 Months

JACKET WATER COOLANT SYSTEM

- System To Be Console Mounted  
 With Deck Plate Suitable For Perimeter Support And Grouting.  
 System To Include:
  - Two Centrifugal Pumps
  - (one)(two) Shell & Tube Heat Exchanger - W/Transfer Valve
  - One Air Cooled Heat Exchanger
- One Console For Each Compressor
- One Console For \_\_\_\_\_ Compressors
- Jacket Water To Be \_\_\_\_\_ % Ethylene Glycol.

REMARKS:

Further torque effort dia. for motor ...  
 Compression dia. ... base on: 1) Compressor unloaded but pressurized  
 2) Reduced voltage per SP-4773-9-46-1

477809-4-0302-01-25-1

(METRIC UNITS)

FLUOR

CONTRACT NO. 477804  
ITEM NO. OILKIDIA, B.C  
REV 4 DATE 2/3/82  
BY EP44 REVIEWED  
SHEET 5 OF 10  
P.O. NO. 477804-9-0302

DATA SHEET  
RECIPROCATING COMPRESSOR  
INSTRUMENTATION

VENDOR MUST FURNISH ALL PERTINENT DATA FOR THIS SPECIFICATION SHEET BEFORE RETURNING.

SERVICE: Crude Column Gas MANUFACTURER: \_\_\_\_\_  
GAUGE READOUT IN  ENGLISH  SI  DUAL  OTHER Metric

REFERENCE SPECIFICATIONS:  
SP-477804-40-100  
SP-477804-70-4

AREA CLASSIFICATION:  
CLASS 1 GROUP 0 DIVISION 2  
MOTOR CONTROL VOLTAGE:  
220 VOLTS 1 PHASE 50 CYCLES  
ALARM & SHUTDOWN VOLTAGE:  
125 VOLTS PHASE CYCLES OR  DC

LOCAL CONTROL PANEL:  
FURNISHED BY: Not Required PURCHASER  
REMARKS: \_\_\_\_\_

NOTE:  SUPPLIED BY VENDOR  SUPPLIED BY PURCHASER Graduated in Kg/cm<sup>2</sup>

PRESSURE GAGE REQUIREMENTS:

FUNCTION	LOCAL MOUNTED	LOCAL PANEL	FUNCTION	LOCALLY MOUNTED	LOCAL PANEL
LUBE OIL PUMP DISCHARGE	<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSOR SUCTION (EA. STAGE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LUBE OIL FILTER $\Delta$ P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	COMPRESSOR DISCHARGE (EA. STAGE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LUBE OIL SUPPLY COMPRESSOR	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
LUBE OIL SUPPLY GEAR	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
LUBE OIL BEARING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

\* Liquid filled - on pulsation suppressors

TEMPERATURE GAGE & THERMOWELL REQUIREMENTS: GRADUATED IN OC

FUNCTION	LOCALLY MOUNTED	LOCAL PANEL	FUNCTION	LOCALLY MOUNTED	LOCAL PANEL
LUBE OIL DISCHARGE FROM EACH	<input type="checkbox"/>	<input type="checkbox"/>	COOLER OIL INLET & OUTLET	<input type="checkbox"/>	<input type="checkbox"/>
GEAR OUTLET	<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSOR SUCTION EA. STAGE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DRIVER JOURNAL BEARING	<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSOR DISCHARGE EA. CYL.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DRIVER THRUST BEARING	<input type="checkbox"/>	<input type="checkbox"/>	JACKET WATER <del>_____</del> THERMOSYPHON	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Crankcase oil</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	JACKET WATER RETURN EA. CYL.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	GEAR JOURNAL BEARING, EA.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	GAS COOLER INLET & OUTLET	<input type="checkbox"/>	<input type="checkbox"/>

\* MOUNTED IN PULSATION SUPPRESSOR

- MISCELLANEOUS INSTRUMENTATION:
- SIGHT FLOW INDICATORS, CYLINDER JACKET WATER RETURN EA. CYL., ROD PACKING COOLANT AND VENTS.
  - LEVEL GAGES CRANKCASE, ~~\_\_\_\_\_~~, LUBRICATOR, ~~\_\_\_\_\_~~
  - COMPRESSOR VIBRATION EQUIPMENT
  - VIBRATION READOUT EQUIPMENT AND UNLOADER
  - PNEUMATIC CLEARANCE POCKET CONTROLS LOCATED ON:  LOCAL PANEL  SEPARATE PANEL  
 MAIN BOARD  CUST PANEL
  - ALARM HORN & ACKNOWLEDGEMENT & TEST SWITCHES (ANNUNCIATORS)
  - PNEUMATIC PRESSURE TRANSMITTERS   PNEUMATIC LEVEL TRANSMITTERS
  - RELIEF VALVES LEVEL GAGES THERMOSYPHON
  - Relief Valve AUXILIARY LUBE OIL PUMP / MAIN LUBE OIL PUMP
  - Hand indicators / status lights

ALARM & SHUTDOWN SWITCHES:

FUNCTION	PRE ALARM	PRE TRIP	FUNCTION	PRE ALARM	PRE TRIP
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> LOW LUBE OIL PRESSURE	<u>X</u>	<u>X</u>	<input type="checkbox"/> <input type="checkbox"/> COMPRESSOR VIBRATION	_____	_____
<input checked="" type="checkbox"/> <input type="checkbox"/> HI LUBE OIL FILTER $\Delta$ P	<u>X</u>	_____	<input type="checkbox"/> <input type="checkbox"/> GEAR VIBRATION	_____	_____
<input checked="" type="checkbox"/> <input type="checkbox"/> LOW MECH LUBRICATOR OIL LEVEL	<u>X</u>	_____	<input type="checkbox"/> <input type="checkbox"/> GEAR AXIAL POSITION	_____	_____

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(METRIC  
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FLUOR

CONTRACT NO. 477804  
ITEM NO. 011K101A, B, C  
REV. 4 DATE \_\_\_\_\_  
BY \_\_\_\_\_ REVIEWED \_\_\_\_\_  
SHEET 6 OF 10  
P.O. NO. 477804-4-0302

DATA SHEET  
RECIPROCATING COMPRESSOR  
INSTRUMENTATION

VENDOR MUST FURNISH ALL PERTINENT DATA FOR THIS SPECIFICATION SHEET BEFORE RETURNING.

SERVICE Crude Column G-75 MANUFACTURER \_\_\_\_\_

ALARM & SHUTDOWN SWITCHES (CONT'D):

2  
4

<input type="checkbox"/>	<input type="checkbox"/>	AND SHAFT ROTATION FAILURE	_____	<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSOR MOTOR SHUTDOWN	_____
<input type="checkbox"/>	<input type="checkbox"/>	LOW SUCTION PRESS. INITIAL	_____	<input type="checkbox"/>	<input type="checkbox"/>	HI DRIVER THRUST BRG. TEMP.	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	HIGH JW TEMP. (EA CYL)	X	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	AUX. LUBE OIL PUMP START	Y	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	HI LIQUID LEVEL-SUCT. SEP.	X	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	HI GAS DISCH TEMP (EA CYL) (IN PUS. SUP.)	X	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

SWITCH CLOSURES:

ALARM CONTACTS SHALL:  OPEN  CLOSE TO SOUND ALARM AND BE NORMALLY  ENERGIZED  DE-ENERGIZED  
SHUTDOWN CONTACTS SHALL  OPEN  CLOSE TO TRIP AND BE NORMALLY  ENERGIZED  DE-ENERGIZED

NOTE: NORMAL CONDITION IS WHEN COMPRESSOR IS IN OPERATION.

MISCELLANEOUS:

PRE-ALARM AND SHUTDOWN SWITCHES SHALL BE SEPARATE.

PURCHASER'S ELECTRICAL AND INSTRUMENT CONNECTIONS SHALL BE:

BROUGHT OUT TO TERMINAL BOXES.  MADE DIRECTLY BY THE PURCHASER

COMMENTS REGARDING INSTRUMENTATION: \_\_\_\_\_

REMARKS: \_\_\_\_\_

① THE VENDOR SHALL PROVIDE THE UNLOADER AT  
FROM THE UNLOADERS TO A TERMINAL POINT  
ON THE COMPRESSOR. ENOUGH TO PROVIDE THE UNLOADER A/C  
PIPING FROM THE TERMINAL POINT TO THE UNLOADER  
--WAY VALVES INSTALLED IN THE LINE

477819-4-0302-01-25-1  
61844

↓ FLOOR  
SPECIFICATION SHEET (METRIC)  
**PULSATION SUPPRESSION DEVICES  
FOR RECIPROCATING COMPRESSORS**

JOB NO. 477804-4-0302  
PAGE NO. 10 OF 10 E.M.H.  
DATE 2/3/82 REV. 4

APPLICABLE TO:  PROPOSAL  PURCHASE  AS BUILT  
FOR Peta. na Refinery Expansion  
SITE Cilacap, Jawa Indonesia  
COMPRESSOR SERVICE Cyclic Column Gas

PURCHASE ORDER NO.: 477804-4-0302  
SUPPRESSOR VENDOR: Ingersoll-Rand  
COMPRESSOR ITEM NO.: Oil 5101A-C

NOTE:  INDICATES INFORMATION TO BE COMPLETED BY PURCHASER  BY MANUFACTURER

**PULSATION SUPPRESSION DEVICE DESIGN DATA**

	Single Stage	
	INLET	DISCHARGE
<input type="checkbox"/> STAGE	5.6	5.6
<input type="checkbox"/> SERVICE	177	177
<input type="checkbox"/> ITEM NO.	0.02	0.06
<input type="checkbox"/> DESIGN PRESSURE, $\frac{Kg}{cm^2}$ Gauge	0.03	0.11
<input type="checkbox"/> DESIGN TEMPERATURE, °C		
<input type="checkbox"/> MAXIMUM PRESSURE DROP, $\frac{Kg}{cm^2}$		
<input type="checkbox"/> MAX. PEAK TO PEAK AT COMPRESSOR VALVES, $\frac{Kg}{cm^2}$ (ABS.)		
<input type="checkbox"/> MAX. PEAK TO PEAK TO LINE SIDE NOZZLE, $\frac{Kg}{cm^2}$ (ABS.)		
<input type="checkbox"/> MAX. PEAK TO PEAK IN LINE, $\frac{Kg}{cm^2}$ (ABS.)		
<input type="checkbox"/> LINE DESIGN NATURAL FREQUENCY, cps.		

**SUPPRESSOR CONNECTIONS**

<input type="checkbox"/> LINE SIDE CONNECTION, SIZE & RATING	8" 150#	8" 150#	8" 150#	8" 150#
<input checked="" type="checkbox"/> COMPRESSOR SIDE CONNECTION, SIZE & RATING	4" 150#	4" 150#	4" 150#	4" 150#
<input checked="" type="checkbox"/> INSPECTION OPENING (BLINDED), NO., SIZE & RATING 1/compart.	2" 300#	2" 300#	2" 300#	2" 300#
<input checked="" type="checkbox"/> VENT CONNECTION (PLUGGED), NO., SIZE & RATING 1/compart.	2" 300#	2" 300#	2" 300#	2" 300#
<input checked="" type="checkbox"/> DRAIN CONNECTION (PLUGGED), NO., SIZE & RATING 1/compart.	1" 300#	1" 300#	1" 300#	1" 300#
<input type="checkbox"/> PRESSURE CONNECTION (6000# COUPLING), NO. & SIZE				
<input checked="" type="checkbox"/> TEMPERATURE CONNECTION (6000# COUPLING), NO. & SIZE	1/1" 300#	2/1" 300#	2/1" 300#	2/1" 300#

**PHYSICAL DATA**

<input checked="" type="checkbox"/> SUPPRESSOR MATERIAL	Carbon STEEL	CARBON STEEL
<input type="checkbox"/> ASTM OR SA DESIGNATION	SAS16-70	
<input type="checkbox"/> SHELL THICKNESS, mm : SHELL DIAMETER, mm	9.5 / 1762	9.5 / 610
<input type="checkbox"/> SHELL SLUG VOLUME, cc		
<input type="checkbox"/> PIPE OR ROLLED PLATE CONSTRUCTION	rolled	rolled.
<input type="checkbox"/> TOTAL WEIGHT, Kgs	1114	894

**GAS AND OPERATING DATA**

<input type="checkbox"/> NORMAL CUBIC METERS/ 24K (760 mm Hg @ 0°C)	2679
<input type="checkbox"/> WEIGHT FLOW, Kg/hr	54.7
<input type="checkbox"/> MOLECULAR WEIGHT	1.107
<input type="checkbox"/> cp/cv VALUE (AVERAGE)	0.971
<input type="checkbox"/> COMPRESSIBILITY FACTOR (Z)	

**COMPRESSOR DATA**

<input type="checkbox"/> MANUFACTURER : MODEL NO.	INGERSOLL-RAND 16416X9 HSE-1
<input type="checkbox"/> INTAKE PRESSURE, $\frac{Kg}{cm^2}$ (ABS.) : TEMPERATURE, °C	1.53 / 49
<input type="checkbox"/> DISCHARGE PRESSURE, $\frac{Kg}{cm^2}$ (ABS.) : TEMPERATURE, °C	5.28 / 87
<input type="checkbox"/> CYLINDER TYPE	DA
<input type="checkbox"/> BORE X STROKE, $\frac{m}{in}$ : swept volume	29650
<input type="checkbox"/> PISTON DISPLACEMENT, $\frac{m^3}{hr}$	1728
<input type="checkbox"/> CLEARANCE VOLUME, % (AVERAGE)	12.5
<input type="checkbox"/> STAGE KILOWATTS	75.5
<input type="checkbox"/> CRANK ANGLE, DEGREES	0°

REMARKS: 1) Provide removable wedge supports for discharge suppressors, double nutted studs at discharge connection. Provide supports for inlet suppressors.

2) Furnish 1" Flanged connection for suppressors thermow. 11.  
3) All Flanges to have 100 to 150 AARH FINISH.

MEMO OF  
DATA TRANSMITTAL  
SEP 9 1981

**GENERAL ELECTRIC**  
SECRETARY B. NEW YORK

Refer to G.E. Order No.  
in Correspondence

CUSTOMER DATE LOCATION PRINTS FORWARDED YOU

MARK - FLUOR - 11K101 AB&C PO 477804-4-0302  
IR PO 1613-32925T  
IR REF 314-16096  
INGERSOLL RAND CO.

STATION OR PROJECT NO.	CUSTOMER CODE	CUSTOMER ORDER	G.E. CONTRACT	G.E. DESCRIPTION
	1613-32925T	3/23/81		306-32161

Drawings are intended to be in accordance with applicable purchase order specifications. Comments are solicited concerning any departure in this respect. Features not covered by purchase order specifications pertain General Electric Company standard design practice. The shipping date for this equipment is based on drawings approved by the above mentioned date, and any delay in approval may extend the shipping schedule. Any requested changes from the purchase order specifications, resulting in additional engineering and/or manufacturing cost, may result in increase in price and the extension of the shipping schedule.

PRINTS ARE:

FOR APPROVAL  FOR INSTALLATION  FOR REFERENCE  \_\_\_\_\_

Approval Required Within 5 Days, OR BY..... (Date)

STATUS OF "FOR APPROVAL" PRINTS SHOULD BE ADVISED TO THE GENERAL ELECTRIC OFFICE WITH WHICH YOUR ORDER IS PLACED. —NOT TO THE FACTORY—

ITEM 1

HIG-9689 SHEET 15, 16, 17 REV. 1 FLUOR SPEC. SHEETS

MAIL (1) REPROD., (3) PRINTS TO:

INGERSOLL RAND CO.  
GAS COMPRESSOR GROUP  
PAINTED POST, NEW YORK 14870  
ATTN: L. BARKLEY

MAIL (1) PRINT TO:

INGERSOLL RAND CO.  
GAS COMPRESSOR GROUP  
PAINTED POST, NEW YORK 14870  
ATTN: R. VOIT

1 PRINT- P. G. KRCH, ISD, SYRACUSE, N. Y. OFFICE

NOTE: THESE PRINTS SUPERSEDE PRINTS PREVIOUSLY MAILED.

- MJ AMOROSI, #16-2
- END PLAY- LIMIT CPLG END FLOAT TO .190 INCHES MAX.

Copy of M/S to ↓

- MOTOR MODEL - 5K830948C15
- NOT. SERIAL -
- APPLICATION -
- ENCLOSURE - WEATHER PROT II
- BEARINGS - SLEEVE - INSULATED FE
- LUBRICATION - OIL
- CODE - G
- TYPE - K
- FRAME - 8309S
- POLES - 12
- H.P. - 250
- SYN. SPEED - 500
- PHASES - 3
- CYCLES - 50
- VOLTS - 3300
- SHAFT EXTEN. - DS2
- SEC. VOLTS -
- SEC. AMPS -
- SEC. CHS(Y) -
- INSUL. CLASS - B- CUSTOM POLYSEAL
- TEMP. RISE - 80°C BY RES. @ 250HZ
- ROT.(O.P.E.) - DUAL
- F.L. SPEED - 490
- F.L. AMPS - 45
- AIR GAP - .045
- END PLAY - 1/2" MIN.
- NET WEIGHT - 6240 LB. APPROX.
- MOTOR TERM -
- LEE TERM -
- HEATER WATTS - 270 LOW SHEATH
- HEATER VOLTS - 230 TEMP HEATERS
- INST. BOOK - GEH-3179
- CUTLERS - 34D112734-001 REV 1
- MOTOR COUPL. -
- HEATER COUPL. -
- SOLE PLATES - 34A740217-002

CUSTOMER'S COUPLING  
DUST SEAL FEATURES  
MAXIMUM KVAR OF CAPACITORS FOR SWITCHING WITH MOTOR (SEE NEC 460-7) 100 KVAR

ENGINEERING REQUIREMENTS SERVICE  
R. MARCUSCELLO, Jm

By

LA-226A (9/84)

PRINTS ARE NOT TO SCALE, are issued subject to return when demand, and the original drawings that they call out be used in any way inconsistent to the General Electric Company.

477809-4-0302-01 -25-1



Ψ FLUOR  
SPECIFICATION SHEET  
ELECTRIC MOTORS

SHEET NO. 15 REV. \_\_\_\_\_  
DATE \_\_\_\_\_  
BY: MED \_\_\_\_\_ ELEC. \_\_\_\_\_  
JOB NO. \_\_\_\_\_

VENDOR MUST COMPLETE ALL SECTIONS (UNLESS DELETED) BEFORE RETURNING

MOTOR NUMBER (S)	G.E. REGN # 306-32161					
MANUFACTURER	G.E. CO.					
1. HORSEPOWER RATING	250					
2. SYNCH. SPEED, RPM	500					
3. FULL LOAD SPEED	490					
4. BEARING TYPE	SPLIT SLEEVE					
5. BEARING LUBRICATION	OIL					
6. VOLTAGE, PHASES, FREQUENCY	3300/3/50					
7. FULL LOAD CURRENT	45					
8. LOCKED ROTOR CURRENT	270					
9. LOCKED ROTOR STALL TIME (COLD)	20 SEC					
10. HOT LOCKED ROTOR STALL TIME: 100% V/80% V	12 / 19 SEC	/	/	/	/	/
11. LOCKED ROTOR TORQUE	100%					
12. PULL-UP TORQUE (SYNCH. ONLY)						
13. BREAKDOWN TORQUE	175%					
14. EFFICIENCY: A. FULL LOAD	92.1					
D. 3/4 LOAD	92.1					
C. 1/2 LOAD	91.0					
15. POWER FACTOR: A. FULL LOAD	79.4					
D. 3/4 LOAD	74.0					
C. 1/2 LOAD	62.5					
D. LOCKED ROTOR	32.0					
16. DBA SOUND PRESSURE LEVEL AT 3' REF. 20 IN/m <sup>2</sup>	85					
17. SPACE HEATERS: VOLTS/WATTAGE	220 / 250	/	/	/	/	/
18. ROTATION	DUAL					
19. INSULATION	G-polySEAL					
20. SERVICE FACTOR	1.0					
21. ENCLOSURE	WPII					
22. FRAME NUMBER	8309S					
23. NFRS. DESIGNATION	CUSTOM 8000					
24. NET WEIGHT	SEE PRINT					
25.	CERT.					
26.						
27.						
28.						
29.	477807-11-0302-C1 - 25-1					
30.						

FLUOR  
DATA SHEET  
ELECTRIC MOTOR

JOB NO. 477804 ITEM NO. 011R1C1M-A,B,C  
PAGE 16 OF 17 BY CGB  
DATE 3/5/81 REV. 3

APPLICABLE TO:  PROPOSAL  PURCHASE  AS BUILT

FOR Pertamina Refinery Expansion  
SITE Cilacap Java Indonesia  
SERVICE Crude Column GD  
MANUFACTURER G.E. Co.

UNIT Crude Distillation  
DRIVEN EQUIP. Recip Compressor  
NO. REQUIRED 3  
SERIAL NO. \_\_\_\_\_

NOTE:  INDICATES INFORMATION TO BE COMPLETED BY PURCHASER;  BY MANUFACTURER

MOTOR DESIGN DATA

APPLICABLE SPECIFICATIONS:

NEMA MG-1  
 SP-477804-46-11

SITE DATA:

AREA:  C.L. 1 GR. 0 DIV. 2  NON-HAZARDOUS  
 ALTITUDE 4 M.  AMBIENT TEMPS: MAX 33°C MIN. 21°C  
UNUSUAL CONDITIONS:  DUST  FUMES Refinery Gases  
 OTHER Rain, Salt Air, Fungus, Tropical Conditions  
DRIVE SYSTEM:  DIRECT CONNECTED  
 GEAR  
 OTHER \_\_\_\_\_

TYPE MOTOR:

SQUIRREL CAGE INDUCTION  NEMA DESIGN B

SYNCHRONOUS  
 POWER FACTOR REQD. \_\_\_\_\_  
EXCITATION:  BRUSHLESS  SLIP RING  
 FIELD DISCHARGE RESISTOR BY MOTOR MFR.  
 WOUND ROTOR INDUCTION

ENCLOSURE:

CLASS \_\_\_\_\_, GROUP \_\_\_\_\_, EXP. PROOF  
 TEFC  
 TEWAC  TEIGF, USING \_\_\_\_\_ GAS.  
 DOUBLE WALL CARBON STEEL TUBES  
 WATER SUPPLY: PRESS. \_\_\_\_\_ Bar & TEMP. \_\_\_\_\_ °C  
 WATER ALLOW. ΔP \_\_\_\_\_ Bar & TEMP. RISE \_\_\_\_\_ °C  
 WATER SIDE MIN. CORR. ALLOW. \_\_\_\_\_ mm  
AND FOUL FACTOR \_\_\_\_\_  
 (AIR) (GAS) SUPPLY PRESS. \_\_\_\_\_ Bar

WEATHER PROTECTED, TYPE II

FORCED VENTILATED  
 OPEN-DRIPPROOF  
 OPEN

BASIC DATA:

3300 VOLTS 3 PHASE 50 HERTZ  
 NAMEPLATE HP 250 SERVICE FACTOR 1.0  
 SYNCHRONOUS RPM 500  
 INSULATION: CLASS B TYPE POLYSEA'  
 TEMP. RISE: 80 °C ABOVE 40 °C BY Resistance

STARTING

FULL VOLTAGE  REDUCED VOLTAGE 80 %  
 LOADED  UNLOADED  
 VOLTAGE DIP \_\_\_\_\_ %

VIBRATION:

NEMA STANDARD  SP-477804-46-11

NOISE:

NEMA STANDARD  SP-477804-100-1

ACCESSORY EQUIPMENT

BASEPLATE  SOLEPLATE  STATOR SHIFT  
 MFR. STD. FANS  NON-SPARKING FANS  
 D.C. EXCITATION:  
 KY REQD. \_\_\_\_\_ VOLTS  
BY:  PURCHASER  MANUFACTURER  
DESCRIPTION \_\_\_\_\_  
 ENCLOSED COLLECTOR RINGS:  
 PURGED: MEDIUM \_\_\_\_\_ PRESS. \_\_\_\_\_ Bar/g.  
 EXPLOSION-RESISTANT NONPURGED  
 FORCED VENTILATION  
 M<sup>3</sup>/HR \_\_\_\_\_ PRESS. DROP \_\_\_\_\_ mm.H<sub>2</sub>O  
 BEARING TEMP. DEVICES:  
 LOCATION \_\_\_\_\_  
 DESCRIPTION \_\_\_\_\_  
 SET @ \_\_\_\_\_ °C FOR ALARM \_\_\_\_\_ °C FOR SHUTDOWN  
 SPACE HEATERS: 2.5  
 370 KW  220 VOLTS 1 PHASE 50 HERTZ  
 MAX. SHEATH TEMP. 200 °C

WINDING TEMPERATURE DETECTORS:

THERMISTORS: NO./PHASE \_\_\_\_\_  
TYPE:  POS. TEMP. COEFF.  NEG. TEMP. COEFF.  
TEMPERATURE SWITCH:  YES  NO  
 RESISTANCE TEMPERATURE DETECTORS: NO./PHASE \_\_\_\_\_  
 RESISTANCE MATL. \_\_\_\_\_ OHMS  
SELECTOR SWITCH & INDICATOR BY:  PURCHR.  MFR.  
 MAX. STATOR WINDING TEMPS:  
\_\_\_\_\_ °C FOR ALARM \_\_\_\_\_ °C FOR SHUTDOWN

WINDING TEMP. DETECTOR & SPACE HEATER LEADS:

IN SAME CONDUIT BOX  
 IN SEPARATE CONDUIT BOXES  
 MOTOR ARRANGED FOR DIFFERENTIAL PROTECTION:  
 SELF-BALANCE PRIMARY-CURRENT METHOD  
 C.T. DESCRIPTION \_\_\_\_\_  
 EXTENDED LEADS  LENGTH \_\_\_\_\_ M.  
 SURGE CAPACITORS  
 LIGHTNING ARRESTERS  
 C.T. FOR AMMETER  
 DESCRIPTION TYPE JCB-0 100:5 CURRENT RATIO, CAT# 807X25

MAIN CONDUIT BOX SIZED FOR:

MAIN MOTOR LEADS  TYPE:  
 INSULATED  NON-INSULATED  
 C.T.'S FOR DIFF. PROTECTION (MOUNTED BY \_\_\_\_\_)  
 SURGE CAPACITORS (MOUNTED BY \_\_\_\_\_)  
 LIGHTNING ARRESTERS (MOUNTED BY \_\_\_\_\_)  
 C.T. FOR AMMETER (MOUNTED BY G.E. TYPE JCB-0)  
 SPACE FOR STRESS CONES 100:5 CURRENT RATIO, CAT# 807X25  
 AIR FILTERS:  
 MFR. \_\_\_\_\_ TYPE \_\_\_\_\_

REMARKS:

G.E. REQ # 306-32161  
HIG # 9/89 (SA2) (3/30/81) REV. 1 (9/18/81)

Y FLUOR  
DATA SHEET  
ELECTRIC MOTOR (Contd)

JOB NO. 477804 ITEM NO. \_\_\_\_\_  
PAGE 17 OF 17 BY \_\_\_\_\_  
DATE \_\_\_\_\_ REV. \_\_\_\_\_

MANUFACTURER'S DATA

MANUFACTURER G.E. Co.  
 FRAME NO. 83095 FULL LOAD RPM (IND.) 490  
 EFFICIENCY: F.L. 92.1 3/4L 92.1 1/2L 91.0  
 PWR. FACTOR (IND.): F.L. 79.4 3/4L 74.0 1/2L 62.5  
 CURRENT (RATED VOLT.): FULL LOAD 45 LOCKED ROTOR 600  
 LOCKED ROTOR POWER FACTOR 32  
 LOCKED ROTOR WITHSTAND TIME (COLD START) 20 SEC  
 TORQUES (kg m): FULL LOAD 370.33  
 LOCKED ROTOR 100% STARTING (SYN.) -  
 PULL-UP (IND.) 100% PULL-IN (SYN.) -  
 BREAKDOWN (IND.) 175% PULL-OUT (SYN.) -

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OPEN CIRCUIT TIME CONSTANT (SEC.) .39  
 SYMMETRICAL CONTRIBUTION TO 30 TERMINAL FAULT:  
 AT 1/2 CYCLES 6.07 pu AT 5 CYCLES .46 pu  
 REACTANCES: SUB-TRANSIENT (X'd) .17 pu  
 TRANSIENT (X'd) - SYNCHRONOUS (X'd) -  
 A.C. STATOR RESISTANCE 1.30 OHMS @ 25 °C (L-4)  
 RATED KVA 257.2  
 KVA INRUSH FULL VOLT. & LOCKED ROTOR (SYN.) -  
 KVA @ FULL VOLTAGE & 95% SPEED -  
 MAX. LINE CURR. IN STATOR ON 1ST SLIP CYC. 1 PULL-OUT (SYN.) -

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ACCELERATION TIME (MOTOR ONLY @ RATED VOLT) NA SEC.  
 ACCEL. TIME (MOTOR & LOAD @ 85% RATED VOLT) NA SEC.  
 ROTOR/FIELD WK<sup>2</sup> + MOTOR SHAFT (kg-m<sup>2</sup>) 27.9  
 ROTATION FACING COUPLING END DUAL  
 NO. OF STARTS PER HOUR 2 COLD 1 HOT

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FIELD DISCHARGE RESISTOR \_\_\_\_\_ OHMS  
 RATED EXCITATION FIELD VOLTAGE \_\_\_\_\_ D.C.  
 RESISTANCE OF EXCITATION FIELD 25°C \_\_\_\_\_ OHMS  
 EXCITATION FIELD AMPS @ FULL LOAD & RATED P.F. \_\_\_\_\_  
 EXCITATION FIELD AMPS: MAX. \_\_\_\_\_ MIN. \_\_\_\_\_  
 EXCITATION FIELD  RHEOSTAT  FIXED RESISTOR REQD.  
 SUPPLIED BY \_\_\_\_\_

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BEARINGS: TYPE SLEEVE LUBR. OIL  
 LUBE OIL REQUIRED: \_\_\_\_\_ m<sup>3</sup>/h \_\_\_\_\_ kg/cm<sup>2</sup>  
 TOTAL SHAFT END FLOAT 1/2" MIN  
 LIMIT END FLOAT TO 3/16" MAX

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MOTOR ROTOR:  SOLID  SPLIT  
 MOTOR HUB:  SOLID  SPLIT

FOR TEWAC & TEIGF MOTORS:  
 COOLING WATER REQD \_\_\_\_\_ m<sup>3</sup>/h  
 C.W. TEMP. RISE \_\_\_\_\_ °C PRESS. DROP \_\_\_\_\_ kg/cm<sup>2</sup>  
 (AIR) (GAS) REQD. \_\_\_\_\_ Nm<sup>3</sup>/h PRESS. MAINT. \_\_\_\_\_ mm H<sub>2</sub>O

CURVES REQD BASED ON MOTOR SATURATION @ RATED VOLTAGE:  
 SPEED vs TORQUE (ALSO @ \_\_\_\_\_ % RATED VOLTAGE)  
 SPEED vs POWER FACTOR  
 SPEED vs CURRENT

---

WEIGHTS (KG):  
 NET WEIGHT 2950 SHIPPING WEIGHT 3400  
 ROTOR WEIGHT 725 MAX. ERECTION WT. 1350  
 MAX. MAINT. WT. (IDENTIFY) STATOR  
 DIMENSIONS (millimeters): SEE OUTLINE  
 L \_\_\_\_\_ W \_\_\_\_\_ H \_\_\_\_\_

SHOP INSPECTION AND TESTS

	REQUIRED	WITNESS
SHOP INSPECTION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TESTING PER NEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MFR. STD. SHOP TESTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IMMERSION TEST	<input type="checkbox"/>	<input type="checkbox"/>
SPECIAL TESTS (LIST BELOW):	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

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COUPLING:  
 SUPPLIED BY COMP. MFR.  
 MFR. \_\_\_\_\_  MODEL \_\_\_\_\_  
 MOTOR MFR.  COMPR. MFR.  PURCH. TO MOUNT MTR. HALF

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PAINTING:  
 MANUFACTURER'S STANDARD  
 \_\_\_\_\_

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SHIPMENT:  
 DOMESTIC  EXPORT  EXPORT BOXING REQUIRED  
 OUTDOOR STORAGE OVER 6 MONTHS  
 EXPORT BOXING WILL BE DONE BY COMPRESSOR VENDOR.

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REMARKS:  
G.E. REGN # 306-32161  
H/L # 9689 (SAN) (3/30/91) Rev 1 (9/8/91)

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477804-4-0302-01-25-