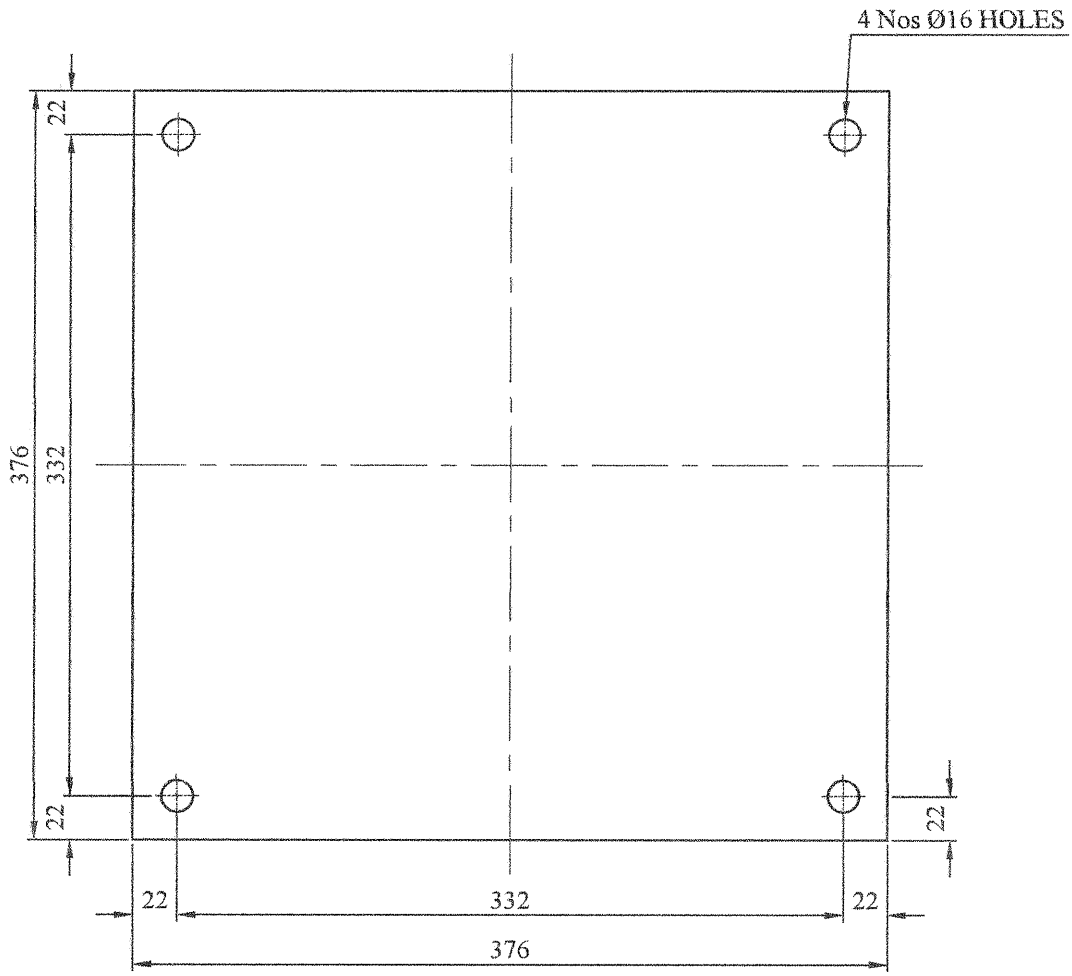


NOTE- ALL DIMENSION ARE IN "mm".

REV.	DATE	BY.	CHECK	APPROVED	DESCRIPTION
A					FOR CONSTRUCTION
O	25/06/25	DIMUTH			FOR COMMENTS

DETAILS OF 92 A MP1-A BASE PLATE

LOCATION:	PROJECT:
CEYLON PETROLEUM CORPORATION REFINERY DIVISION SAPUGASKANDE	SCALE:
	SKETCH No: 2046

CENTRIFUGAL PUMP API-610

DATA SHEET
MKS UNITS

JOB NO. _____ ITEM NO. _____
REQ / SPEC No. _____ / _____
PURCH ORDER No. _____ DATE 25-Mar-22
INQUIRY No. _____ BY _____

APPLICABLE TO: ○ PROPOSAL ● PURCHASE ☐ AS BUILT
FOR: Ceylon Petroleum Corporation UNIT: 92a MP1A
SITE: Sapugaskanda, Kelaniya, Sri Lanka SERVICE: Slop Sump
NO. REQ 1 PUMP SIZE TYPE: Sump Type NO. STAGES 1
MANUFACTURER Pompe Gabbioneta MODEL 6565-Closed SERIAL No. 60713

NOTES: INFORMATION BELOW TO BE COMPLETED ○ BY PURCHASER ☐ BY MANUFACTURER ◯ BY MANUFACTURER OR PURCHASER

○ GENERAL

PUMPS TO OPERATE IN (PARALLEL)	No. MOTOR DRIVEN 1	No. TURBINE DRIVEN —
(SERIES) WITH	PUMP ITEM No.	PUMP ITEM No.
GEAR ITEM No.	MOTOR ITEM No.	TURBINE ITEM No.
GEAR PROVIDED BY	MOTOR PROVIDED BY Manufacturer	TURBINE PROVIDED BY
GEAR MOUNTED BY	MOTOR MOUNTED BY	TURBINE MOUNTED BY
GEAR DATA SHT. No.	MOTOR DATA SHT. No.	TURBINE DATA SHT. No.

OPERATING CONDITIONS

○ CAPACITY NORMAL 25 (m^3/h) RATED _____ (m^3/h)
OTHER 25 (m^3/h)
○ SUCTION PRESSURE MAX/RATED ___ / 14.70 (psia)
○ DISCHARGE PRESSUR 41.7 (psia)
○ DIFERENTIAL PRESSURE 27 (psi)
○ DIFF. HEAD 68 (Ft) NPSHA 10 (Ft)
○ PROCESS VARIATIONS
○ STARTING CONDITIONS
SERVICE: ● CONT. ○ INTERMITTENT (STARTS/DAY)
○ PARALLEL OPERATION REQ'D

See Note below

● SITE AND UTILITY DATA

LOCATION:
○ INDOOR ○ HEATED ○ UNDER ROOF
● OUTDOOR ○ UNHEATED ○ PARTIAL SIDES
○ GRADE ○ MEZZANINE ○
○ ELECTRICAL AREA CLASSIFICATION
CL _____ GR _____ DIV 1
○ WINTERIZATION REQ'D ● TROPICALIZATION REQ'D.

SITE DATA
○ ALTITUDE <1000 (m) BAROMETER _____ (PSIA)
○ RANGE OF AMBIENT TEMP: MIN/MAX. 77 / 104 (°F)
○ RELATIVE HUMIDITY: MIN / MAX _____ / 95 (%)
UNUSUAL CONDITIONS: ○ DUST ○ FUMES
○ OTHER
○ UTILITY CONDITIONS:

STEAM:	DRIVERS		HEATING	
MIN.:	___ (Kg/cm^2)	___ (°C)	___ (Kg/cm^2)	___ (°C)
MAX.:	___ (Kg/cm^2)	___ (°C)	___ (Kg/cm^2)	___ (°C)

ELECTRICITY	DRIVERS	HEATING	CONTROL	SHUTDOWN
VOLTAGE:	400	230		
HERTZ:	50 ± 3%	50 ± 3%		
PHASE:	3	1		

COOLING WATER:
TEMP. INLET ___ (°C) MAX. RETURN ___ (°C)
NORM PRESS. ___ Kg/cm^2 DESIGN ___ (PSIG)
MIN RETORNO ___ Kg/cm^2 MAX ALLOW DP ___ (PSI)

SITE AND UTILITY DATA (COT'D)

WATER SOURCE
CHLORIDE CONCENTRATION (PPMW)
INSTRUMENT AIR: MAX / MIN PRESS ___ / ___ (Kg/cm^2)

LIQUID

○ TYPE OR NAME OF LIQUID Separated Oil
○ PUMPING TEMPERATURE:
NORMAL 100 (°F) MAX 150 (°F) MIN 77 (°F)
○ VAPOR PRESSURE 10 (psia) 100 (°F)
○ RELATIVE DENSITY (SPECIFIC GRAVITY):
● NORMAL 0.92 MAX ___ MIN ___
○ SPECIFIC HEAT, Cp ___ (Kcal/kg°C)
○ VISCOSITY 130 (cSt) @ 100 (°F)
○ MAX. VISCOSITY ___ (Cp)
○ CORROSIVE/EROSIVE AGENT Sulphur
○ CHLORIDE CONCENTRATION (PPMW)
○ H_2S CONCENTRATION (PPMW)
LIQUID ○ HAZARDOUS ○ FLAMMABLE
○ OTHER

PERFORMANCE

PROPOSAL CURVE No. ___ ☐ RPM ___
☐ IMPELLER DIA RATED ___ MAX ___ MIN ___ (mm)
☐ RATED POWER ___ (BHP) EFFICIENCY ___ (%)
☐ MINIMUM CONTINUOUS FLOW:
THERMAL ___ (m^3/h) STABLE ___ (m^3/h)
☐ PREFERRED OPERATING REGION ___ TO ___ (m^3/h)
☐ ALLOWABLE OPERATING REGION ___ TO ___ (m^3/h)
☐ MAX HEAD @ RATED IMPELLER ___ (m)
☐ MAX POWER @ RATED IMPELLER ___ (BHP)
☐ NPSHR AT RATED CAPACITY ___ (m)
◯ SUCTION SPECIFIC SPEED ___
☐ MAX. SOUND PRESS. LEVEL REQ'D ___ (dBA)
☐ EST MAX. SOUND PRESS. LEVEL ___ (dBA)
REMARKS:

SHEET 1 OF 5

* Relative density can be increased upto 1.
* Maximum suction pressure is 2.2m of the liquid height to the pump.

* Note: It is suggested to increase the Normal Capacity to 25 m^3/hr based on the capacity of API Seperator.

Acf. MTS 2025/07/01

CENTRIFUGAL PUMP API-610

DATA SHEET
MKS UNITS

JOB NO. _____ ITEM NO. _____
REQ / SPEC No. _____ / _____
PURCH ORDER No. _____ DATE 25-Mar-22
INQUIRY No. _____ BY _____

CONSTRUCTION

APPLICABLE STANDARD:
- ● API 610 ~~10TH EDITION~~ Latest edition
- ○ OTHER _____ (SEE REMARKS)

PUMP TYPE:

☒ OH2	☐ BB1	☐ VS1	☐ VS6
☒ OH3	☐ BB2	☐ VS2	☐ VS7
☒ OH6	☐ BB3	☐ VS3	☐ OTHER
	☐ BB4	■ VS4	
	☐ BB5	☐ VS5	

☐ NOZZLE CONDITIONS:

	SIZE	RATING	FACE	POSITION
FLANGE				
SUCTION				
DISCHARGE	MR	MR	MR	MR
BALANCE DRUM				

PRESSURE CASING CONNECTIONS:

	No.	SIZE (NPS)	TYPE
☐ DRAIN			
☐ VENT			
☐ PRESSURE GAUGE			
☐ TEMP GAUGE			
☐ WARM-UP			
☐ BALANCE/LEAK OFF			

- ○ CYLINDRICAL THREADS REQUIRED

CASING MOUNTING: (SEE SEPARATE SHEET FOR VERTICLES)
- ☐ CENTERLINE ☐ NEAR CENTERLINE
- ☐ FOOT ☐ SEPARATE MOUNTING PLATE
- ☐ IN-LINE

CASING SPLIT:
- ☐ AXIAL ■ RADIAL

CASING TYPE:
- ■ SINGLE VOLUTE ☐ MULTIPLE VOLUTE ☐ DIFFUSER
- ☐ OVERHUNG ☐ BETWEEN BEARINGS ☐ BARREL

CASE PRESSURE RATING:
- ☐ MAX ALLOWABLE WORKING PRESSURE _____ (Kg/cm²)
- @ _____ (°C)
- ☐ HIDRO TEST PRESSUR 70 (PSIG)
- ○ SUCT'N PRESS. REGIONS MUST BE DESIGNED FOR MAWP

ROTATION: (VIEWED FROM COUPLING END)
- ☐ CW ☐ CCW
- ○ IMPELLERS INDIVIDUALLY SECURED

REMARKS: _____

- ○ BOLT OH3 PUMP TO PAD/FOUNDATION

SHAFT:
- ☐ SHAFT DIAMETER AT COUPLING _____ (mm)

CONSTRUCTION (CONT)

- ☐ SHAFT DIAMETER BETWEEN BEARINGS _____ (mm)
- ☐ SPAN BETWEEN BEARING CENTERS _____ (mm)
- ☐ SPAN BETWEEN BEARING & IMPELLER _____ (mm)

REMARKS: _____

COUPLINGS: DRIVER-PUMP
- ○ MAKE _____
- ☒ MODEL _____
- ☐ RATING (KW/100 RPM) _____
- ○ LUBRICATION _____
- ☒ LIMITED END FLOAT REQUIRED _____
- ☒ SPACER LENGHT _____ (mm)
- ☒ SERVICE FACTOR _____

DRIVER HALF COUPLING MOUNTED BY:
- ● PUMP MFR. ○ DRIVER MFR. ○ PURCHASER
- ○ COUPLING PER API671

BASEPLATES: *
- ○ API BASEPLATE NUMBER _____
- ○ NON-GROUT CONSTRUCTION

REMARKS: See annexure 02 and annexure 03 for configuration and dimensions of existing pump and the existing pit dimensions. The new pump bases plate is required to be mount in the existing pump base.

MATERIAL

- ○ CLASS Suitable for the intended service
- ○ MIN DESIGN METAL TEMP _____ (°C)
- ☐ BARREL/CASE _____ IMPELLER _____
- ☐ CASE/IMPELLER WEAR RING _____
- ☐ SHAFT _____
- ☐ DIFFUSERS _____
- ☐ COUPLING SPACER/HUBS _____
- ☐ COUPLING DIAPHAGMS (DISKS) _____

REMARKS: _____

BEARINGS AND LUBRICATION

BEARING (TYPE / NUMBER):
- ☐ RADIAL _____ / _____
- ☐ THRUST _____ / _____
- ○ REVIEW AND APPROVE THRUST BEARING SIZE

LUBRICATION:
- ● GREASE ☒ FLOOD ☒ RING OIL
- ☒ FLINGER ☒ PURGE OIL MIST ☒ PURE OIL MIST
- ○ CONSTANT LEVEL OILER PREFERENCE (SEE REMARKS)
- ○ PRESSURE LUBE SYS ○ API-610 ○ API-614
- ○ OIL VISC. ISO GRADE

REMARKS:
* A drawing of available pump base plate attached.

CENTRIFUGAL PUMP API-610

DATA SHEET
MKS UNITS

JOB NO. _____ ITEM NO. _____
REQ / SPEC No. _____ / _____
PURCH ORDER No. _____ DATE 25-Mar-22
INQUIRY No. _____ BY _____

BEARINGS AND LUBRICATION (CONT)

○ OIL HEATER REQ'D ○ ELECTRIC ○ STEAM
○ OIL PRESS TO BE GREATER THAN COOLANT PRESS
REMARKS: _____

MECHANICAL SEAL OR PACKING

SEAL DATA:
○ SEE ATTACHED API-682 DATA SHEET
○ NON API-682 SEAL
○ SEAL CODE _____
○ SEAL MANUFACTURER _____
○ SIZE AND TYPE _____ / _____
○ MANUFACTURER CODE _____

SEAL CHAMBER DATA:
○ TEMPERATURE _____ (°C)
○ PRESSURE _____ (Kg/cm^2)
○ FLOW _____ (m^3/h)
☐ SEAL CHAMBER SIZE _____
☐ TOTAL LENGTH (in) ☐ CLEAR LENGTH (mm)

SEAL CONSTRUCTION:
☐ SLEEVE MATERIAL _____
☐ GLAND MATERIAL _____
○ AUX SEAL DEVICE _____
○ JACKET REQUIRED _____

GLAND TAPS:
○ FLUSH (F) ○ DRAIN (D) ○ BARRIER/BUFF (B)
○ QUENCH (Q) ○ COOLING (C) ○ LUBRICATION (G)
○ HEATING (H) ○ LEAKAGE ○ PUMPED FLUID (P)
○ BALANCE FLUID (E) ○ EXTERNAL FLUID INJECTION (X)

SEAL FLUIDS REQUIREM'T AND AVAILABLE FLUSH LIQUID:
NOTE:IF FLUSH LIQUID IS PUMPAGE LIQUID (AS IN FLUSH PIPING PLANS 11 TO 41), FOLLOWING FLUSH LIQUID DATA IS NOT REQ'D.
○ SUPPLY TEMPERATURE MAX/MIN _____ / _____ (°C)
○ RELATIVE DENSITY (SPECIFIC GRAVITY) _____ @ _____ (°C)
○ NAME OF FLUID _____
○ SPECIFIC HEAT, Cp _____ (KJ/Kg°C)
○ VAPOR PRESSURE _____ (PSI abs)@ _____ (°F)
○ HAZARDOUS ○ FLAMMABLE ○ OTHER _____
☐ FLOW RATE MAX/MIN _____ / _____ (m^3/h)
☐ PRESSURE REQ'D MAX/MIN _____ / _____ (Kg/cm^2)
☐ TEMPERATURE REQ'D MAX/MIN _____ / _____ (°C)

BARRIER/BUFFER FLUID
○ SUPPLY TEMPERATURE MAX/MIN _____ / _____ (°C)
○ RELATIVE DENSITY (SPECIFIC GRAVITY) _____ @ _____ (°C)
○ NAME OF FLUID _____

MECHANICAL SEAL OR PACKING (CONT)

○ VAPOR PRESSURE _____ (PSIA) _____ (°C)
○ HAZARDOUS ● FLAMMABLE ○ OTHER _____
☐ FLOW RATE MAX/MIN _____ / _____ (m^3/h)
☐ PRESSURE REQ'D MAX/MIN _____ / _____ (Kg/cm^2)
☐ TEMPERATURE REQ'D MAX/MIN _____ / _____ (°C)

QUENCH FLUID:
○ NAME FLUID _____
☐ FLOW RATE _____ (m^3/h)

SEAL FLUSH PIPING:
○ SEAL FLUSH PIPING PLAN _____
○ TUBING ○ CARBON STEEL
○ PIPE ○ STAINLESS STEEL
○ AUXILIARY FLUSH PLAN
○ TUBING ○ CARBON STEEL
○ PIPE ○ STAINLESS STEEL
○ PIPING ASSEMBLY:
○ THREADED ○ UNIONS ○ SOCKET WELDED
○ FLANGED ○ TUBE TYPE FITTINGS
○ PRESSURE SWITCH (PLAN 52/53) TYPE _____
○ PRESSURE GAUGE (PLAN 52/53)
○ LEVEL SWITCH (PLAN 52/53) TYPE _____
○ LEVEL GAUGE (PLAN 52/53)
○ TEMP INDICATOR (PLAN 21, 22, 23, 32, 41)
○ HEAT EXCHANGER (PLAN 52/53)
REMARKS: _____

PACKING DATA:
MANUFACTURER _____
TYPE Suitable (Precautional only)
SIZE _____ No. OF RINGS _____
☐ PACKING INJECTION REQUIRED
☐ FLOW _____ (m^3/h) @ _____ (°C)
☐ LANTERN RING _____

STEAM AND COOLING WATER PIPING

○ COOLING WATER PIPING PLAN _____
○ COOLING WATER REQUIREMENTS
○ SEAL JACKET/BRG HSG _____ (m^3/h) @ _____ (Kg/cm^2)
○ SEAL HEAT EXCHANGER _____ (m^3/h) @ _____ (Kg/cm^2)
○ QUENCH _____ (m^3/h) @ _____ (Kg/cm^2)
TOTAL COOLING WATER _____ (m^3/h)
○ STEAM PIPING ○ TUBING ○ PIPE
REMARKS: _____

ADDITIONAL REMARKS: _____

CENTRIFUGAL PUMP API-610

DATA SHEET
MKS UNITS

JOB NO. _____ ITEM NO. _____
REQ / SPEC No. _____ / _____
PURCH ORDER No. _____ DATE 25-Mar-22
INQUIRY No. _____ BY _____

INSTRUMENTATION

VIBRATION:
- ○ NON CONTACTING (API-670) ○ TRANSDUCER
- ○ PROVISION FOR MOUNTING ONLY
- ○ FLAT SURFACE REQ'D
- ○ SEE ATTACHED API-670 DATA SHEET
- ○ MONITORS AND CABLES

REMARKS: _____

TEMPERATURE AND PRESSURE:
- ○ RADIAL BRG METAL TEMP ○ THRUST BRG METAL TEMP
- ○ PROVISION FOR INSTRUMENTS ONLY
- ○ SEE ATTACHED API-670 DATA SHEET
- ○ TEMP GAUGES (WITH THERMOWELLS)
- OTHER _____
- ○ PRESSURE GAUGE TYPE _____
- LOCATION _____

REMARKS: _____

SPARE PARTS

- ● START-UP ○ NORMAL MAINTENANCE
- ○ SPECIFY _____

MOTOR DRIVE

- ○ MANUFACTURER _____
- _____ KW ☐ _____ (RPM)
- ☐ HORIZONTAL ■ VERTICAL
- ☐ FRAME _____
- ○ SERVICE FACTOR 1.15
- ○ VOLTS/PHASE/HERTZ 400V ± 10% / 3 Phase / 50Hz ± 3%
- ○ TYPE _____
- ○ ENCLOSURE TEFC Non Sparking (Ex 'n"), Gas group IIB, T3, accorcing to TEC
- ○ MINIMUM STARTING VOLTAGE _____
- ○ TEMPERATURE RISE _____
- ○ FULL LOAD AMPS _____
- ○ LOCKED ROTOR AMPS _____
- ○ INSULATION _____
- ○ STARTING METHOD (DOL) Starting with full load
- ○ LUBE Grease
- ☐ VERTICAL THRUST CAPACITY _____
- UP _____ (N) DOWN _____ (N)

BEARINGS (TYPE / NUMBER):
- ☐ RADIAL _____ / _____
- ☐ THRUST _____ / _____

MOTOR DRIVE (CONT)

REMARKS: _____

SURFACE PREPARATION AND PART

- ● MANFACTURER'S STANDARD
- ○ OTHER (SEE BELOW)

PUMP:
- ● PUMP SURFACE PREPARATION _____
- ● PRIMER _____
- ● FINISH COAT _____

BASEPLATE:
- ● BASEPLATE SURFACE PREPARATION _____
- ● PRIMER _____
- ● FINISH COAT _____

SHIPMENT:
- ○ DOMESTIC ○ EXPORT ○ EXPORT BOXING REQUIRED
- ● OUTDOOR STORAGE MORE THAN 6 MONTHS

SPARE ROTOR ASSEMBLY PACKAGED FOR:
- ○ HORIZONTAL STORAGE ○ VERTICAL STORAGE
- ○ TYPE OF SHIPPING PREPARATION _____

REMARKS: _____

☐ WEIGHTS

MOTOR DRIVEN:
- WEIGHT OF PUMP (Kg) _____
- WEIGHT OF BASEPLATE (Kg) _____
- WEIGHT OF MOTOR (Kg) _____
- WEIGHT OF GEAR (Kg) _____
- TOTAL WEIGHT (Kg) _____

TURBINE DRIVEN:
- WEIGHT OF BASEPLATE (Kg) _____
- WEIGHT OF TURBINE (Kg) _____
- WEIGHT OF GEAR (Kg) _____
- TOTAL WEIGHT (Kg) _____

REMARKS: _____

OTHER PURCHASE REQUIREMENTS

- ○ COORDINATION MEETING REQUIRED
- ● REVIEW FOUNDATION DRAWINGS
- ○ REVIEW PIPING DRAWINGS
- ○ OBSERVE PIPING CHECKS
- ○ OBSERVE INITIAL ALIGNMENT CHECK
- ○ CHECK ALIGNMENT AT OPERATING TEMPERATURE
- ○ CONNECTION DESIGN APPROVAL

REMARKS: _____

CENTRIFUGAL PUMP API-610

DATA SHEET
MKS UNITS

JOB NO. _____ ITEM NO. _____
REQ / SPEC No. _____ / _____
PURCH ORDER No. _____ DATE 25-Mar-22
INQUIRY No. _____ BY _____

OTHER PURCHASER REQUIRIMENTS (CONT)

- ○ RIGGING DEVICE REQ'D FOR TYPE OH3 PUMP
- ○ HYDRODYNAMIC THRUST BRG SIZE REVIEW REQ'D
- ☐ LATERL ANALYSIS REQUIRED
- ☐ ROTOT DYNAMIC BALANCE
- ☐ MOUNT SEAL RESERVOIR OFF BASEPLATE
- ☐ INSTALLATION LIST IN PROPOSAL
- ○ SPARE ROTOR VERTICAL STORAGE
- ○ TORSIONAL ANALYSIS / REPORT
- ○ PROGRESS REPORTS REQUIRED

REMARKS: _____

QA INSPECTION AND TEST

- ● REVIEW VENDORS QA PROGRAM
- ● PERFORMANCE CURVE APPROVAL
- ○ SHOP INSPECTION
- ☐ TEST WITH SUBTITUTE SEAL

TEST	NON-WIT	WIT	OBSERVED
HYDROSTATIC	○	●	○
PERFORMANCE	○	●	○
NPSH	○	●	○
COMPLETE UNIT TEST	○	●	○
SOUND LEVEL TEST	●	○	○
○ CLEANLINESS PRIOR TO FINAL ASSEMBLY	○	○	○
○ NOZZLE LOAD TEST	○	○	○
○ BRG HSG RESONANCE TEST	○	○	○
○ REMOVE / INSPECT HYDRODYNAMIC BEARINGS AFTER RESR	○	○	○
○ AUXILIARY EQUIPMENT TEST	○	○	○
○ _____	○	○	○
○ _____	○	○	○

- ○ MATERIAL CERTIFICACION REQUIRED
  - ● CASING ● IMPELLER ● SHAFT
  - ○ OTHER _____
- ○ CASTING REPAIR PROCEDURE APPROVAL REQ'D
- ● INSPECTION REQUIRED FOR CASTINGS
  - ○ MAGNETIC PARTICLE OR ○ LIQUID PENETRANT
  - ● RADIOGRAPHIC ● ULTRASONIC
- ○ INSPECTION REQUIRED FOR CASTINGS
  - ○ MAGNETIC PARTICLE OR ○ LIQUID PENETRANT
  - ○ RADIOGRAPHIC ○ ULTRASONIC

QA INPECTION AND TEST (CONT)

- ○ ADDITIONAL INSPECTION REQUIRED FOR: _____
  - ○ MAGNETIC PARTICLE ○ LIQUID PENETRANT
  - ○ RADIOGRAPHIC ○ ULTRASONIC
- ○ ALTERNATE ACCEPTANCE CRITERIA (SEE REMARKS)
- ○ HARDNESS TEST REQUIRED FOR: _____
- ○ WETTING AGENT HYDROSTEST
- ● VENDOR SUBMIT TEST PROCEDURES
- ○ RECORD FINAL ASSEMBLY RUNNING CLEARANCES
- ○ INSPECTION CHECK-LIST (APPENDIX N) _____

REMARKS: _____

GENERAL REMARKS

REMARKS 1: _____

REMARKS 2: _____

REMARKS 3: _____

REMARKS 4: _____

REMARKS 5: _____

REMARKS 6: _____

ADDITIONAL REMARKS: _____

SNAM DIVISIONE PROGETTI - MILANO - ITALIA

JOB N° 27200 | Sheet 3 of 5

FILE N° 92a-MA-E-30001

CENTRIFUGAL PUMP DATA SHEET

Issue	Date	Ch.	REVISIONS
0	4/7/67	DL	ISSUED FOR INQUIRY
1	13/11/67	DL	ISSUED FOR ORDER TO GABBIONETA
2	6/12/67	DL	REVISED WHERE INDICATED ②

PURCHASE ORDER N° 27200-CPC-90 JOB N° 27200 INQUIRY N° 27200-CPC-117

CUSTOMER CEYLON PETROLEUM CORPORATION ITEM No. 92a-P1A/B

ADDRESS COLOMBO - CEYLON PLANT LOCATION COLOMBO REFINERY

PUMP MFR POMPE GABBIONETA SIZE AND TYPE VI 150 SUMP TYPE No. REQ'D 2

SERVICE SLOP SUMP MOTOR DRIVE 2 TURBINE DRIVE —

OPERATING CONDITIONS

Liquid HYDROCARBONS USGPM at PT, MIN 9 Des 45

Solids Disch Press (PSIA) 41,7

PT °F 100 Suct Press (PSIA), Nor 14,7 Max

SP GR at PT 0,92 Diff Press (PSI) 27

Vap. Press. at PT (PSIA) 10 Diff Head (FT.) 68

Vis at PT (cSt) 130 MAX. NPSH Avail (FT.) 10

Corr/Eros caused by SULPHUR (Indoor) (Outdoor X) (Roof)

CONSTRUCTION AND MATERIALS

Casing-Mounting (Centerline) (Foot) (Bracket) (Vertical X) SUBMERGED WITH EXTERNAL MOTOR (1)

Split (Axial) (Radial X)

Type (Single volute X) (Double volute) (Diffuser)

Tapped openings (Vent X) (Drain X) (Gage cocks)

NOZZLES	SIZE	ASA RATING	FACING	POSITION
SUCTION				
DISCHARGE	2"	150	RF	SIDE

Impeller Diam Des 135 mm. Min/Max 110/150 mm Type CLOSED

Mfr's bearing No. Radial SLEEVE Thrust BALL

Coupling and guard Base plate YES

Packing SUITABLE (PRECAUTIONAL ONLY)

Mech seal Class code MFR

Flow regulation type

Automatic relief valve Lubrication type GREASE (THRUST BEARING)

Casing thickness Min/Max 9/12 mm. Corrosion allow 4 mm.

MATERIAL CODE

		I	B	S	C	X
I-Cast Iron	Internal code					
B-Bronze	Casing	I	B	(S)	C	
S-Steel	Impeller	(I)	B	S	C	
C-11-13% chrome	Inner case parts	(I)	I	S	C	
A-Alloy	Sleeve (Packed)	Ch	Ch	Al	Al	
h-Hardened	Sleeve (Seal)	C	C	C	C	18/8
f-Faced	Wear parts	(I)	B	Ch	Ch	
X-	Shaft	S	S	S	S	Acc. 11/13 % Cr

MOTOR DRIVER BY SNAM P.

Item No. 92a-P1A/B Mtd by

HP 4,2 RPM 2950 Frame V1

MFR

Type Insul

Encl Temp. rise C

Volts/phase/cycles

Bearings Lube

Full load Amp

TURBINE DRIVER BY —

Item No. Mtd by

HP RPM Mat'l

MFR and type

Inlet steam (ATA) Temp. °C

Exhaust

Steam rate kg/BHP.hr

Bearings Lube

Nozzles	Size	ASA Rating	Facing	Position
Inlet				
Exhaust				

PERFORMANCE

Proposal curve No. 118628

NPSH req'd (2)

No. of stages 1 RPM 2950

Des Eff 21% VISC. BHP 3,3

Max BHP Des Imp 4

Max head Des Imp m.

Min continuous USGPM. 8,8

Rotation facing coupling end C.W.

Water cooling

Bearing

Stuff box

Pedestal

Gland

Total water req'd m³/h

Packing cooling

Flushing

Aux piping

Axial force kg

Radial force kg

Moment/torque (on flanges) kgm

Eye area Sq.in.

Inlet peripheral velocity Ft/sec

Specific speed

Inlet/Outlet abs. vol. m/sec

Inlet/Outlet rel. vol. m/sec

SHOP TESTS	REQ'D	WITNESSED
Running perf	YES	YES
NPSH		
Hydrostatic 70 PSIG		

Max allow WP (3) 35 PSIG. 190 °F

Weights: Pump 420 Lbs Base

Motor Turbine

MFR FINAL DATA (AS BUILT)

Actual impeller diam

Test curve No.

Outline DWG. No.

Pump sect. DWG. No.

Seal diam. DWG. No.

Pump serial No.

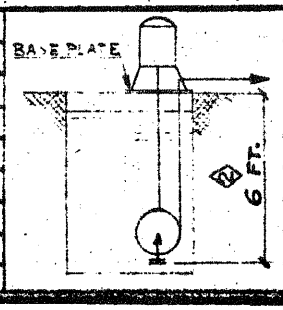
SNAM Div. PROGETTI Spec. M600 & M.612 GOVERNS UNLESS OTHERWISE STATED

REMARKS: (1) VERTICAL DISTANCE FROM UNDERSIDE BASE PLATE TO UNDERSIDE STRAINER = 6 FT. ②

(2) MINIM. SUBMERGENCE REQUIRED = 500mm. (ABOVE STRAINER END)

(3) NOT LESS THAN 32,5 PSIG. & 150°F

(4) THE PUMPS SHALL BE SUPPLIED COMPLETE WITH SUITABLE SUCTION STRAINERS.

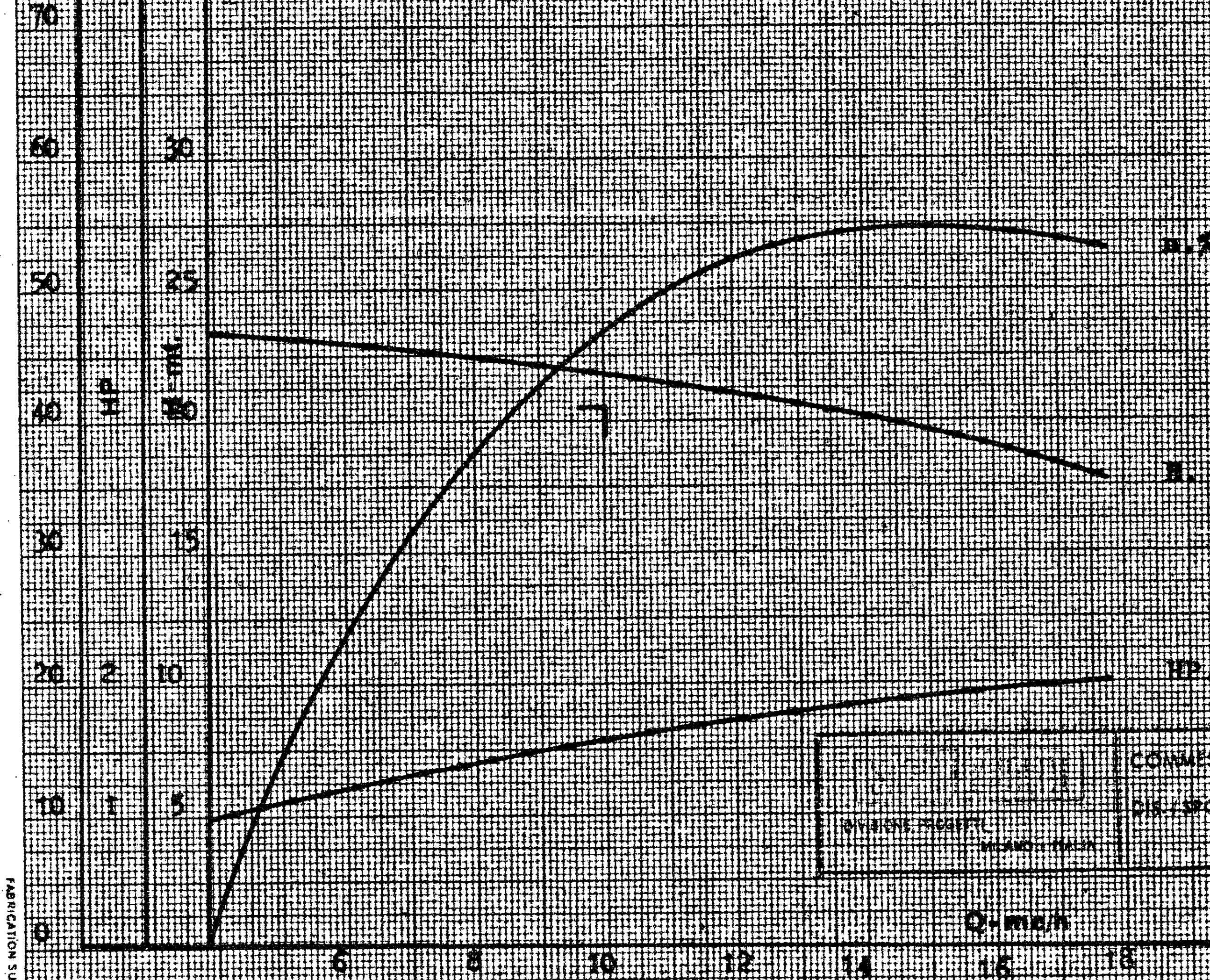


SP-6600 5

POMPE GABBIONETA MILANO

92a P.1 A/B

pompa mod. V.I. 150 n° 60713-60714 giri 2950 prova n.



COMMESSA 27200 24.1.69

DIS./SPEC. N° 922-MA-E-32823

APPROVATO IL 24.1.69

FABRICATION SUISSE

Soc. SNAM PROGETTI - CEYLON - ord. 27200-CPC-9o Item 92a P1 B

Pump N. 60714 Order 13681 Test N. 127049

Model VI 150 SUMP TYPE

MADE IN STEEL C.

Suction I.D. 50 Discharge I.D. 50

Impeller 4 130 X 6 - 8 BLADES 8 - MODEL 6565 - CLOSED EYE ø 46

made in CAST IRON

Motor TEST

4 kW. 3000 RPM. 50 Hz.

5,45 HP. N.

380 V. A. Conn Δ

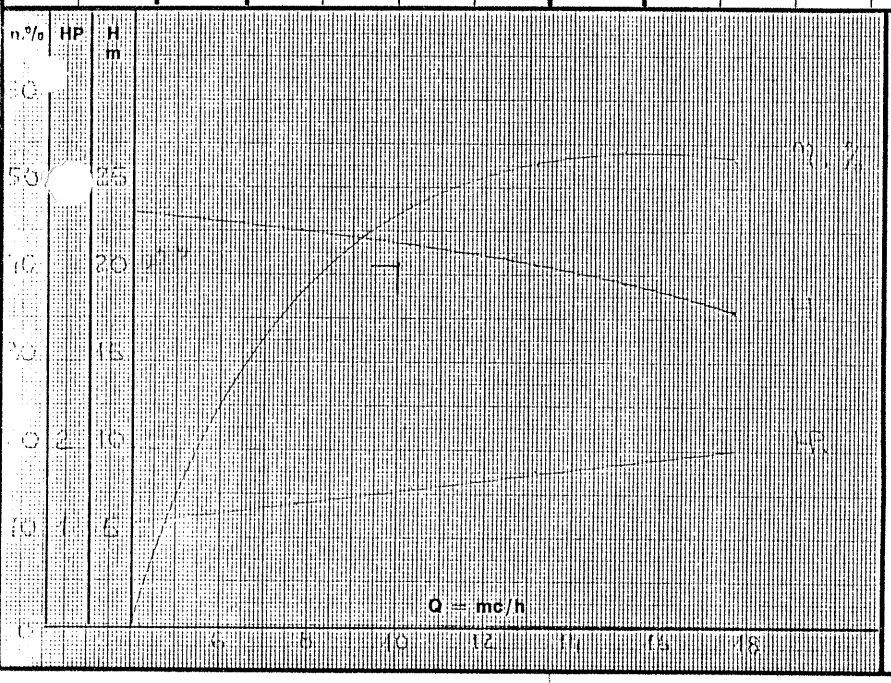
POMPE GABBIONETA

Sesto San Giovanni 7-2-1968

Liquid HYDROCARBONS Vis. 130 cst Q 10 cm/h H 22,5 m. s.g. 0,92 temp. 38°C

Suction	Discharge (1)	TOTAL HEAD (2) m	RPM	K = W/f. div. W 1	W 2	W1+W2	Capacity Q=cm/h	Mot. kW. (3)	V.	abs. A.	Eff. % Mot.	abs. power HP. (3)	Eff. % Pump (4)	H	Q	HP
														2,050 s. g. 0,92		RPM
		23	2970			14,3	—		380		81%	0,97		22,7	—	0873
		22,9	2970			23,5	7,9		"		"	1,55	43,3	22,6	7,85	1,395
		21,9	2965			26,5	10,3		"		"	1,75	47,9	21,65	10,25	1,58
		20,7	2960			29,3	13,2		"		"	1,93	52,5	20,6	13,15	1,755
		19,4	2960			30,8	15,2		"		"	2,025	54	19,25	15,15	1,84
		17,9	2960			33,3	17,7		"		"	2,2	53,3	17,75	17,65	2,-
			HYDROSTATIC TEST 70 PSIG													

SUBMERSED



"Sorveglianza" - S. I. A.
Reparto Ispezioni Tecniche 10

(1) e (2) meters in column of liquid
(3) with liquid s.g. = 1
(4) motor excluded