



PUMP DATA SHEET



PROJECT TITLE	STANDBY CENTRIFUGAL PUMP P-290B			DATE	21-04-2019		
PUMP TAG NO.	P-290-B	P&ID NO		REVISION	0		
SERVICE	REACTION	PLANT	FD	REFERENCES			
	SOLUTION	UNIT	PENTA				
REVISION NOTE							
PROCESS AND PERFORMANCE DATA							
FLUID	PENTA LIQUID		NORMAL CAPACITY(m3/hr)	45			
VAPOR PRESSURE(bar)	0.15		RATED CAPACITY(m3/hr)	55			
SPECIFIC GRAVITY	1.05		PRESSURE(bar)	6			
VISCOSITY(cp)	1		TEMPERATURE(Deg C)	50-55			
HEAD(M)	SUCTION		DISCHARGE		DIFFERENTIAL		
	Static Pressure		6		55		
Friction				6			
Total							
Normal suction pressure(bar)			Normal discharge pressure(bar)				
NPSH Required(m)	3.2		Pump Design Head(m)				
MECHANICAL DETAILS							
Included		Seal	YES	Motor	Baseplate	Coupling	YES
Type		End suction	YES	Inline	Multistage	Canned Motor	NO
Standard		ANSI	YES	API	Other		
Nozzles	Size	Rating	Face	Casing Taps	Size	Rating	Facing
Suction	VTS	VTS	VTS	Vent	VTS	VTS	VTS
Discharge	VTS	VTS	VTS	Drain	VTS	VTS	VTS
Mechanical Seal	Single		Double		Others		
Seal Flushing Plan	Flush Plan No.		53A	ANSI	API		
	Flush Fluid		VTS	m3/hr	Bar	temperature	
Seal Chamber	Stuffing Box						
Pump - Total BHP Required			Efficiency		0.90		
Motor Type	Induction Motor		HP	20	RPM		
Electricity - Voltage	480 V±10%		Hertz	60±3%	Phase		
Explosion Proof	IP55 Ex(d) Protection		Hazardous Area Classification			Zone 2 Area	
Temperature Class	T4/T3		Duty		Cont	ENCL	TEFC
Electrical Area - Class	T4		Group	IIA & IIB	Division		
MATERIALS OF CONSTRUCTION(Refere below notes)							
Casing							
Impeller							
Shaft							
Baseplate							
Gaskets							
Remarks	VTS-Vendor to specify						
Notes	Existing pump MOC to be followed						

EXISTING PUMP - P-290A



NIKKISO NON-SEAL PUMP DATA SHEET

(CENTRIFUGAL CANNED MOTOR PUMP) HN24D-C3FHD*01D2XX-ACCC

PURCHASER LIBRA TECHCON LIMITED
 OWNER METHANOL CHEMICALS COMPANY LIMITED
 SITE _____
 UNIT _____
 SERVICE REACTION SOLUTION
 ITEM NO. P290A
 NO. OF PUMP REQ 1 DRIVER CANNED MOTOR
 PUMP MFR. NIKKISO CO., LTD. MODEL NO. HN24D-C3

DOC NO. KU67E0598K-DS REV. 0
 PURCHASER JOB NO. _____
 ORDER NO. _____
 NIKKISO MASTER NO. EKU67E0598
 MADE BY C. TAKAHASHI2007-08
 APPROVED BY O. WATANABE2007-08
 SERIAL NO. EK67E0598K-1

OPERATING CONDITION	
LIQUID <u>PENTA LIQUID</u>	CAP. @PT (m ³ /h) NOR <u>45</u>
	RATED <u>55</u>
PUMPING TEMP. (°C) <u>50</u>	DISCH. PRESS (kgf/cm ² MPa) <u>5.72</u>
SP. GR. @PT <u>1.05</u>	SUCT. PRESS MAX _____
VAP. PRESS @PT (kgf/cm ² MPa) <u>0.15</u>	(kgf/cm ² MPa) NOR <u>-0.05</u>
VIS @PT (cP 厘泊) <u>1</u>	DIFF. PRESS (kgf/cm ² MPa) <u>5.77</u>
SP. HEAT @PT (kcal/kg°C 千卡/公斤°C) <u>0.9</u>	DIFF. HEAD (m) <u>55</u>
MELTING TEMP. (°C) _____	NPSHA (m) <u>7</u>
CORR/EROS. CAUSED BY _____	HYD. hp (kW) <u>8.62</u>

PERFORMANCE	
SPEED (rpm) _____	<u>3400</u>
NPSHR (WATER) (m) _____	<u>3.49</u>
MIN. CONTINUOUS FLOW (m ³ /h) _____	<u>4.8</u>
ROTATION (VIEWED FROM MOTOR) _____	CW
PUMP EFF (%) _____	<u>57</u>
RATED BHP (KW) _____	<u>15.13</u>
MAX. BHP (KW) _____	<u>18.74</u>
HEAD (M) _____	<u>61.9</u>
WITH RATED IMP.	

CONSTRUCTION	
CASING MOUNT <u>FOOT</u>	CASING SPLIT <u>RADIAL</u>
TYPE <u>SINGLE VOLUTE</u>	
MAX. ALLOWABLE PRESS. (kgf/cm ² MPa) <u>10</u>	θ (°C) <u>165</u>
HYDROSTATIC TEST PRESS. (kgf/cm ² MPa) <u>15</u>	
IMPELLER DIA. (mm) RATED <u>192</u>	MAX <u>224</u> MIN <u>180</u>
MOUNT <u>OVERHUNG</u>	IMPELLER TYPE <u>CLOSED</u>
BEARING TYPE <u>RADIAL SLEEVE</u>	THRUST <u>PLAIN</u>
LUBRICATION <u>SELF (PUMPING LIQUID)</u>	
NO. OF STAGES <u>1</u>	
COUPLING <u>NOT REQ'D</u>	PACKING <u>NOT REQ'D</u>
MECHANICAL SEAL <u>NOT REQ'D</u>	BASE <u>COMMON</u>

AUXILIARY PIPING	
C. W. REQ (m ³ /h) _____	MAX. <u>36 (°C)</u>
REV. CIRCULATION (m ³ /h) _____	-
LOSS IN REV. CIRC. LINE (m) _____	-
EXT. FLUSH FLUID _____	-
(m ³ /h) _____	-
(kgf/cm ² MPa) _____	-

MATERIALS					
CASING	<u>SCS16A</u>				
IMPELLER	<u>SCS16</u>				
SHAFT	<u>SUS316L</u>				
STATOR LINER (CAN)	<u>SUS316L</u>				
ROTOR SLEEVE (CAN)	<u>SUS316L</u>				
BEARING	<u>CG11</u>				
SHAFT SLEEVE	<u>SUS316L/HCR</u>				
THRUST WASHER	<u>SUS316L/HCR</u>				
PUMP GASKET	<u>PTFE-CE</u>				
MOTOR GASKET	<u>PTFE</u>				
STATOR BANDS	<u>SS400 (C. ST.)</u>				

BEARING MONITOR E MONITOR FOR LOCAL INDICATION

MOTOR DRIVER	
k W <u>20</u>	SYNCHRONOUS SPEED (rpm) <u>3600</u>
VOLT / PHASE / HERTZ <u>480 / 3 / 60</u>	DATE _____
GRADE <u>LOW VOLT (ION 3)</u>	NAME _____
MANUFACTURER <u>NIKKISO</u>	LOCKED MOTOR AMPS <u>161</u>
1. TYPE <u>APPROVED</u>	INDUCTION MOTOR
2. INSULATION CLASS <u>F</u>	ENCLOSURE <u>IP55/d2G4</u>
CONDUIT TAP _____	54
COMMENTS: REVISE & RESUBMIT _____	22

INSPECTION & TESTS		
TEST	REQ	WIT
PERFORMANCE	<u>0</u>	-
HYDROSTATIC	<u>0</u>	-
MASS (kg) (PUMP & MOTOR)	<u>178</u>	

1807-3460-11

GRADUATE ENGINEER (ION 3)

1. MANUFACTURER APPROVED NIKKISO

2. INSULATION CLASS F

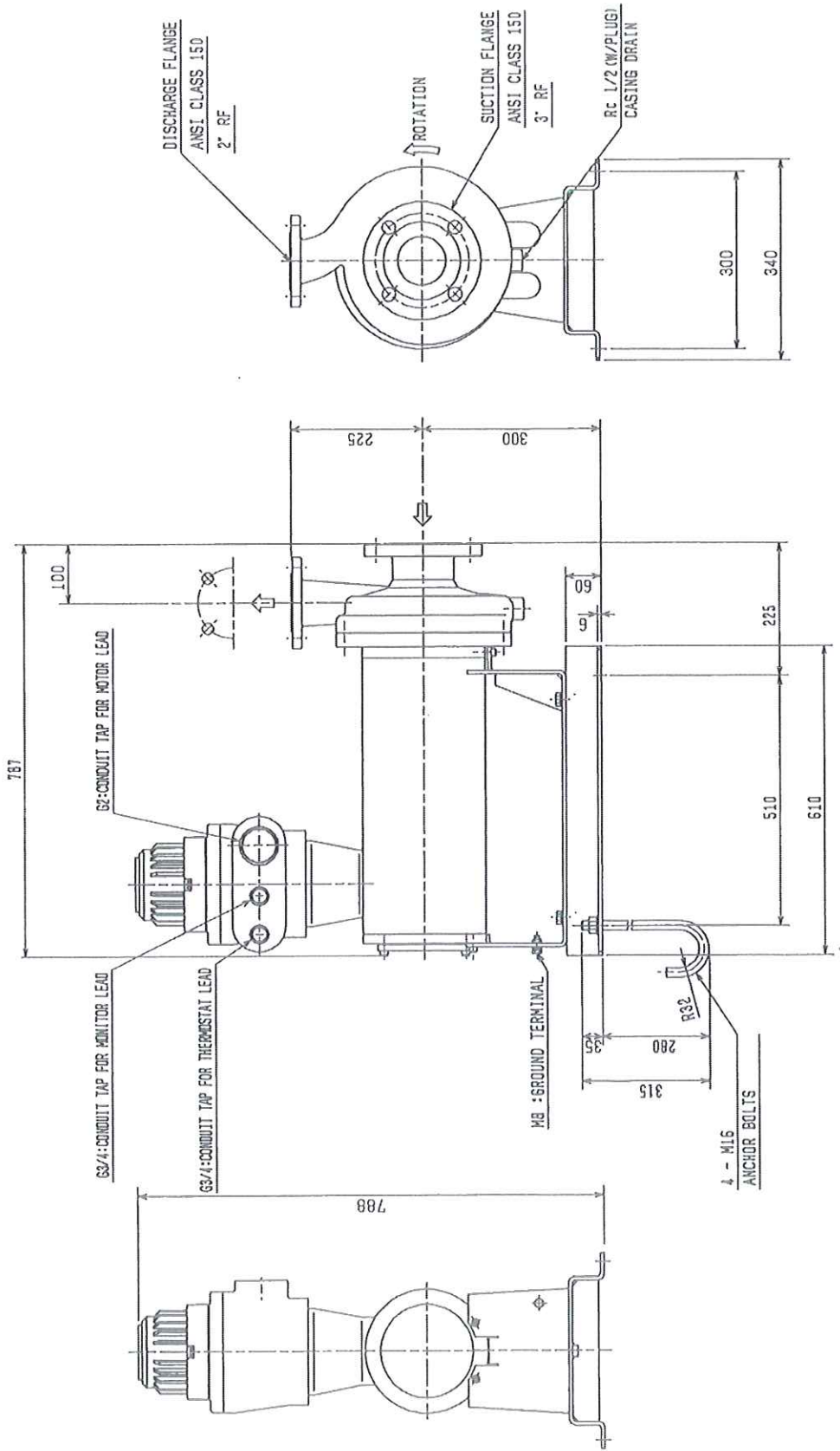
3. REMARKS REJECTED, REDESIGN & RESUBMIT

TERMS: THIS APPROVAL DOES NOT RELIEVE THE VENDOR OF HIS RESPONSIBILITY OF CODE COMPLIANCE DIMENSIONAL ACCURACY AND CONFORMITY WITH SNCL STANDARDS

PAINTING MUNSIEL 10CY5. 3/3

MATERIAL CODE (ASTM EQUIVALENT)	
FCD450	DUCTILE IRON (A536 65-45-12)
SCV480	CAST STEEL (A216 FCB)
S25C	STEEL (A108 1025)
SCS13	304 SS CASTING (A351 CF8)
SCS14	316 SS CASTING (A351 CF8M)
SUS304	304 SS (A276 304)
SUS316	316 SS (A276 316)
HC	HASTELLOY C-276 (B575) EQUIV.
CG X	CARBON GRAPHITE NO. X (-)
V6501	NON-ASBESTOS SHEET (-)
PTFE	POLYTETRAFLUORO ETHYLENE (-)
HCR	HARD CHROMIUM PLATING (-)
GRA	GRAPHITE SHEET (-)

EXISTING PUMP - P-290A



MASS APPROX. 178 kg

1 Pip → Comments applicable as per P-125 A/B.

RS

製造番号 SERIAL NO.	EG67E0590K-1	品番 ITEM NO.	P290A
REV.	DATE	DESCRIPTION	MADE
◇X			AF14
◇X			R. TANI
◇X			2001-08-21
◇X			2001-11-21
APPROVED	CHECKED	MADE	3/16 ANGLE PROJECTION
AF14	AF14	AF14	
SIGNATURE	SIGNATURE	SIGNATURE	
D. YATABE	C. TAKASHI	R. TANI	
DATE	DATE	DATE	
2001-08-21	2001-08-21	2001-11-21	
製造元 NO. KUG7E0590K-00		MODEL :	HM20-C3
TITLE		OUTLINE DRAWING	
日本製 外 形		NIKISO NON-SEAL PUMP	
製造元		NIKISO	
製造元		NIKISO CO., LTD.	
製造元		TOKYO, JAPAN	
製造元		FORM NO. H10-1102M	