

Customer: World Energy Paramount
Equipment Owner: Air Products Manufacturing LLC
APCI No: EN207119-TEI-9V3-00023
Order No: 4505499561
Job No: A8KM
Project Name: World Energy Renewables Project
Item No: 18-P-360 A/B
Item Name: Wash Water Circulation Pump
Model: F98-417C4XM-0405T1V-A

No. QFP-1521A

□ **Customer** : World Energy Paramount

Sign For Receipt
(For customer)

TEIKOKU ELECTRIC MFG. CO., LTD.

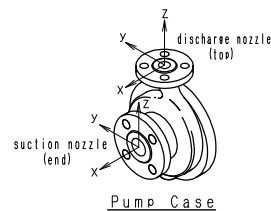
Approved by	Checked by	Designed by
K. Akashi	K. Akashi	K. Nagase

Qty : 2

Operating Conditions					Materials				
Total Head (ft) : 226.8 Capacity (GPM) : 60.2 (m3/h) : 13.67					Casing : ALLOY C-276 Impeller : ALLOY C FBH : ALLOY C RBH : ALLOY C-276 Motor Flange : ALLOY C-276 Stator Can : ALLOY C-276 Shaft : ALLOY C-276 Rotor Can : ALLOY C-276 Bearing : SiC Shaft Sleeve : + Thrust Collar : ALLOY C-276+Tun.Carbide Pump Gasket : ALLOY C-276+Grafoil Motor Gasket : ALLOY C-276+Grafoil Other Gasket : ALLOY C-276+Grafoil Circulation Piping : ALLOY C-276				
Suction Press. (psiG) : 722.3 ☒ Discharge Press. (psiG) : 819.2 ☒ NPSHava. (ft) : 438.5 NPSHreq. (ft) : 7.5 Liquid : Sour Water Temperature (Max/Range) (°F) : 130 / 130-180 Specific Gravity (Des./Range) : 0.99 / --- Viscosity (Des./Range) (cP) : 0.53 / --- Specific Heat (BTU/lbmR) : 1.024 ☒ Melting Temp. (°F) : --- Vapor Press. (psiA) : 549.7 ☒ Solids Name : --- Concentration (wt%) : --- Particle Size (μ in.) : --- S.Gr. : --- Flushing or Barrier Fluid : --- at Sp. Gr./Vis.(cP) : --- / ☒ Press. (psiG) : S.P.+ --- ± --- Flow (GPM) : ---									
Pump Design & Construction					Performance				
Design Press. (psi) : 1160 Des. Temp. (°F) : 500 Code Applied : API685 ☒ Nameplate : English					Imp. Dia(Rated) : ※ ☒ (in.) Imp. Dia(Max.) : 8.19 (in.) Imp. Dia(Min.) : 6.54 (in.) Min. Flow (GPM) : 10.57 Impeller Type : CLOSE Min. Flow (m3/h) : 2.401 No. of Stage : 1				
Nozzle Connection : ASME Finish : SERRATED Ra 3.2-6.3 μm									
Nozzle	Rating	Size	Facing	Position					
Suction	900LB	2"	RF	END					
Discharge	900LB	1-1/2"	RF	TOP					
Drain(Casing)	900LB	3/4"	RF	SIDE					
Drain(RBH)	900LB	3/4"	RF	SIDE					
Pressure Transmitter	---	NPT1/2"	---	---					
Jacket Design Press. (psi) : ---									
Utilities Required	Media	Condition(Max)	Flow(Min.)	Connection					
Casing	NONE	---	---	---					
Motor	NONE	---	---	---					
Cooler/Ext. Tube	NONE	---	---	---					
Motor(Stop)	---	---	---	---					
Power Supply & Drive Motor					Spare Parts				
Frame No. : 417 Duty : Cont Voltage(V) : 460 Frequency(Hz) : 60 Phase : 3 Pole : 2 Output (hp/kW) : 20.1/15 Rated Amp. (A) : 30 Start Amp. (A) : 136 Thermal Class : 220 Start Method : DIRECT R. P. M. (rpm) : 3600 Direction : C.C.W. (Viewed from Pump Suction) Voltage for protection(V) : --- Protection Device : Thermocouple(TYPE K) Dry Run Protection Relay : --- Terminal Box : Stud/Thread/ 1 Power Cable Conduit : NPT1-1/2 Cable O.D. (Main) (in.) : --- Instrument Cable Conduit : NPT3/4 Cable O.D. (Sub) (in.) : --- ATEX Marking : ---					Front Bearing : 4 PCS Pump Gasket : 4 PCS Rear Bearing : 4 PCS Motor Gasket : 4 PCS Shaft Sleeve : 4 PCS Gasket(for circulation pipe) : ☒ 12 PCS Thrust Collar : 4 PCS Lockwasher : 2 Sets ☒ Orifice(for circulation pipe) : 2 PCS				
Accessories					Drawings and Documents				
					Dimensional Dwg. : 6L-6193 Thermowell : 4N-7613 Terminal Box : ☒ 6M-1026 ☒ Pump Discharge Filter : 6M-1027 Sectional View Dwg. : 3E-8815 ☒ Name Plate : 3M-9975 Material List : P-35705 ☒ Orifice : 6M-1028 Est. Performance Curve : SFP-1521A Instruction Manual : HE-12342 Connection Diagram : 6M-0962 Spare Parts List : SP-FP1521A Allowable Piping Forces and Moments : 4N-9587-02				
Other					Special Treatment : None Painting Color : Light Gray Rotating Direction : Monitoring : Yes Bearing Wear Monitor : Radial / Local				
Remarks : •T-USA#409731 •Hazardous Area Classification : Class1, Div.2, Gr. A, B, C&D NEC T4, CSA ☒ ☒ •FP1521A-1:7.60 , FP1521A-2:7.68 ☒ •Maximum Suction Pressure: 904.7 psiG					REVISIONS F: Revised 2 points (Jan. 31' 23) K. Nagase E: Revised 1 point (Nov. 14' 22) K. Nagase D: Revised 1 point (May. 24' 22) K. Nagase C: Revised 21 points (Feb. 2' 22) K. Nakazumi B: Revised 1 point (Dec. 27' 21) K. Nagase				

33 TUSA コピー : 0 PDF : 1 K. Nagase

Allowable Piping Forces & Moments



Fsx	Fsy	Fsz	Fdx	Fdy	Fdz
200	160	130	160	130	200
Msx	Msy	Msx	Mdx	Mdy	Mdz
340	170	260	340	170	260

NOTE : F = force (lb) M = moment (lb-ft)

S = suction nozzle

d = discharge nozzle

See the figure for orientation of nozzle loads (x, y, z)

The allowable force & moment is 2 times the value shown in table.

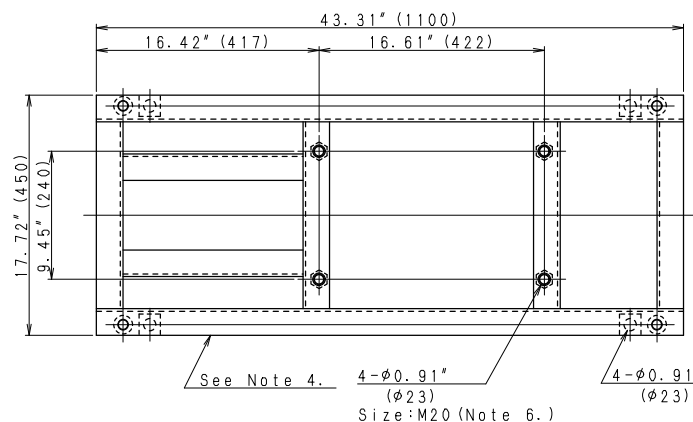
Description: Canned Motor Pump (Sealless Pump)

Customer : World Energy Paramount
 Equipment Owner : Air Products Manufacturing LLC
 APCI No. : EN207119-TEI-9V3-00007
 Order No. : 4505499561
 Job No. : A8KM
 Project Name : World Energy Renewable Project
 Item No. : 18-P-360 A/B
 Item Name : Wash Water Circulation Pump
 Model : F98-417C4XM-0405T1V-A
 Unit : RJFU-B
 WBS : 1801
 Total Weight (includes baseplate) : 1234lbs (560kg)

Note

- Center of gravity
- A connection port for the pneumatic test for the secondary containment shell. After the test, this will be plugged and welded to close.
- 20.1HP@3600RPM 460V / 3PH / 60HZ
- Open top baseplate.
- No Drain pan, rim or port with baseplate.
- Pump shall be installed to baseplate by Teikoku Anchor Bolt dimensioned locations are shown in front and side view.
- Circulation Pipe size: 3/8" x Sch80
Circulation Flange size: ASME900Lb 1/2" RF
- Bore Size:

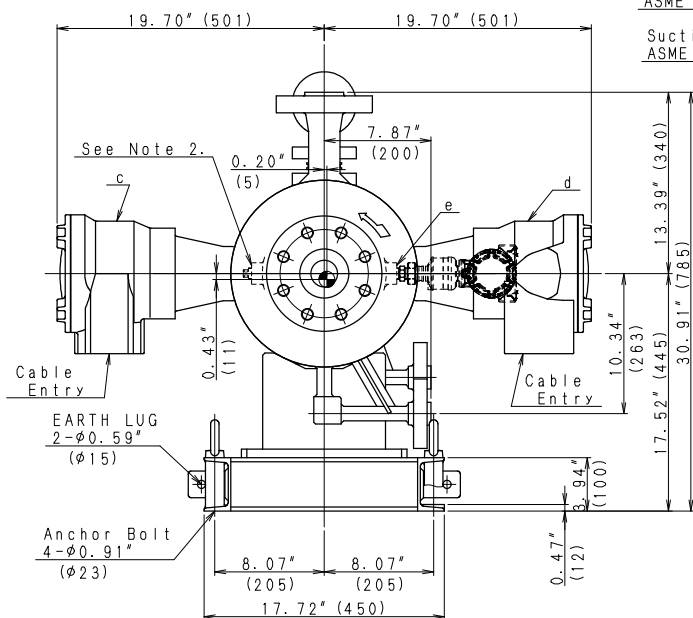
Item No.	Bore Size (in.)
18-P-360 A	0.12
18-P-360 B	0.12



NOZZLE

- a...Casing Drain ASME900Lb 3/4" RF
 b...Rotor Cavity Drain ASME900Lb 3/4" RF
 c...Terminal Box for Power NPT1-1/2
 d...Terminal Box for Protection NPT3/4
 e...Pressure Transmitter NPT1/2

Customer: World Energy Paramount
 Equipment Owner: Air Products Manufacturing LLC
 APCI No: EN207119-TEI-9V3-00007
 Order No: 4505499561
 Job No: A8KM
 Project Name: World Energy Renewables Project
 Item No: 18-P-360 A/B
 Item Name: Wash Water Circulation Pump
 Model: F98-417C4XM-0405T1V-A
 Unit: RJFU-B
 WBS: 1801

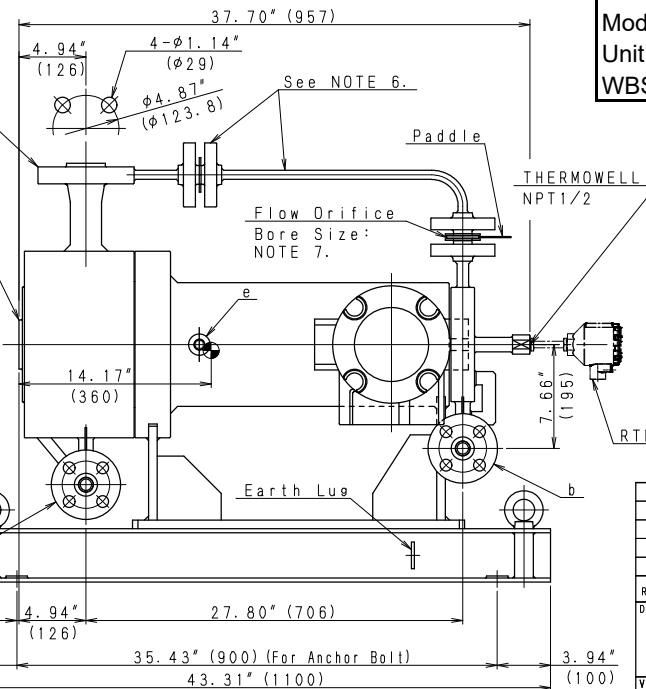
Discharge
ASME 900Lb 1 1/2" RFSuction
ASME 900Lb 2" RF8-7/8"-9UNC
TAPPING 29

Ø6.50" (Ø165.1)

Lifting
Lug
Size: M20

0.16" (4)

3.94" (100)



AS-BUILT

G	Rewritten	Mar-1-23	KN	MM	
F	Rewritten	May-24-22	KN	MM	KA
E	Rewritten	Feb-15-22	KN	MM	KA
D	Rewritten	Feb-2-22	KN	MM	KA

REV. NO.	REVISIONS	DATE	DRN	CHKD	APPD
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DWG. TITLE

GENERAL ARRANGEMENT DRAWING

VENDOR	株式会社 帝国電機製作所 TEIKOKU ELECTRIC MFG. CO., LTD.	SCALE	SIZE	SHEET	REV.
		1:7	A2	1/1	G
DWG. No.					6L-6193

A



LEFT SIDE FROM
PUMP SUCTION

C

TERMINAL BOX-B
(For protection)
RIGHT SIDE FROM
PUMP SUCTION

D

REVISIONS

TERMINAL BOX
L (WITH O-RING)

TEIKOKU ELECTRIC MFG. CO., LTD.

6M-1026

TERMINAL MARK

<T. BOX-A>

U · V · W · · · · POWER SOURCE (M6)

1 · 2 · NOT USED

G1 · G2 · · · · TRG METER (M4)

TERMINAL MARK

<T. BOX-B>

1 · 2 · THERMOCOUPLE (M4)

3, 4, 5 ···· RTD (for stator liner) (M4)

6 NOT USED

3E-8815

NOTE

BEARING A---With spiral & straight grooves

No.	NAME OF PARTS	No.	NAME OF PARTS
66A	GASKET	01	CASING
66B	GASKET	02	IMPELLER
66C	GASKET	03	FILTER
88	ORIFICE	14	R. B. HOUSING
900	THERMOWELL	15A	BEARING A
901	WEARING	15B	BEARING A
		16	SHAFT
		17	SHAFT SLEEVE
		18	THRUST COLLAR
		19	ROTOR ASS'Y
		20	STATOR ASS'Y
		21	ROTOR CAN
		22	STATOR CAN
		24	TERMINAL BOX ASS'Y
		32	F. B. HOUSING
		34	CIRCULATION PIPE
		40	BASE
		41	HOLDER
		46A	BOLT
		46B	BOLT
		46C	BOLT
		46D	BOLT
		46E	BOLT
		47A	NUT
		47B	NUT
		47C	NUT
		48	SET SCREW
		49A	STUD BOLT
		49B	STUD BOLT
		49C	STUD BOLT
		53A	SPRING WASHER
		53B	SPRING WASHER
		53C	SPRING WASHER
		54	PLAIN WASHER
		55A	WASHER
		55B	WASHER
		55C	WASHER
		56A	ADJUSTING WASHER
		56B	ADJUSTING WASHER
		57A	LOCK WASHER
		57B	LOCK WASHER
		58A	KEY
		58B	KEY
		64A	SPACER
		64B	SPACER

A

B

C

D FP1521A

REVISIONS	
B	Rewritten Dec. 27, '21 K. Nagase
C	Rewritten Feb. 1, '22 K. Nagase
D	Rewritten May. 24, '22 K. Nagase

AS-BUILT

Customer: World Energy Paramount
Equipment Owner: Air Products Manufacturing LLC
APCI No: EN207119-TEI-9V3-00014, EN207119-TEI-9V3-00019
EN207119-TEI-9V3-00018
Order No: 4505499561
Job No: A8KM
Project Name: World Energy Renewables Project
Item No: 18-P-360 A/B
Item Name: Wash Water Circulation Pump
Model: F98-417C4XM-0405T1V-A

APPROVED	CHECKED	DRAWN	SCALE	DWG. TITLE
<i>Kabosh</i>	<i>M. Mori</i>	K. Nagase Nov. 11, '21	FREE	構造断面図 SECTIONAL VIEW DRAWING
株式会社 帝国電機製作所 TEIKOKU ELECTRIC MFG. CO., LTD.				DWG. NO. 3E-8815

MATERIAL LIST

(1/1)

NO.	NAME	MATERIAL (JIS Std./Eq. ASTM, AISI Std.)	REMARKS		
01	CASING	ALLOY C-276	80Mesh		
02	IMPELLER	ALLOY C			
03	FILTER	ALLOY C-276			
14	R. B. HOUSING	ALLOY C-276			
15A	BEARING A	SiC			
15B	BEARING A	SiC			
16	SHAFT	ALLOY C-276			
17	SHAFT SLEEVE	ALLOY C-276 + Tun.Carbide			
18	THRUST COLLAR	ALLOY C-276 + Tun.Carbide			
19	ROTOR ASS' Y	-----			
20	STATOR ASS' Y	-----			
21	ROTOR CAN	ALLOY C-276			
22	STATOR CAN	ALLOY C-276			
24	TERMINAL BOX ASS' Y	FC200 etc. / Cl.No.35 etc.			
32	F. B. HOUSING	ALLOY C			
34	CIRCULATION PIPE	ALLOY C-276			
40	BASE	SS400 / Carbon Steel			
41	HOLDER	SS400 / Carbon Steel			
46A	BOLT	ALLOY C-276			
46B	BOLT	ALLOY C-276			
46C	BOLT	S20C / Carbon Steel			
46D	BOLT	ALLOY C-276			
46E	BOLT	ALLOY C-276			
47A	NUT	S40C / AISI1045			
47B	NUT	S40C / AISI1045			
47C	NUT	S40C / AISI1045			
48	SET SCREW	ALLOY C-276			
49A	STUD BOLT	SNB7 / AISI4137			
49B	STUD BOLT	SNB7 / AISI4137			
49C	STUD BOLT	SNB7 / AISI4137			
53A	SPRING WASHER	SWRH / Carbon Steel			
53B	SPRING WASHER	SWRH / Carbon Steel			
53C	SPRING WASHER	SWRH / Carbon Steel			
54	PLAIN WASHER	SPCC / Carbon Steel			
55A	WASHER	ALLOY C-276			
55B	WASHER	ALLOY C-276			
55C	WASHER	ALLOY C-276			
56A	ADJUSTING WASHER	ALLOY C-276			
56B	ADJUSTING WASHER	ALLOY C-276			
57A	LOCK WASHER	ALLOY C-276			
57B	LOCK WASHER	ALLOY C-276			
58A	KEY	ALLOY C-276			
58B	KEY	ALLOY C-276			
64A	SPACER	ALLOY C-276			
64B	SPACER	ALLOY C-276			
66A	GASKET	ALLOY C-276 + Grafoil			
66B	GASKET	ALLOY C-276 + Grafoil			
66C	GASKET	ALLOY C-276 + Grafoil			
88	ORIFICE	ALLOY C-276			
900	THERMOWELL	ALLOY C-276			
901	WEARING	ALLOY C-276			
(F)		APPROVED	CHECKED	DRAWN	P-35705
C:Rewritten(Feb. 1' 22) K. Nagase B:Rewritten(Dec. 27' 21) K. Nagase			M. Mori	K. Nagase Nov. 12 ' 21	

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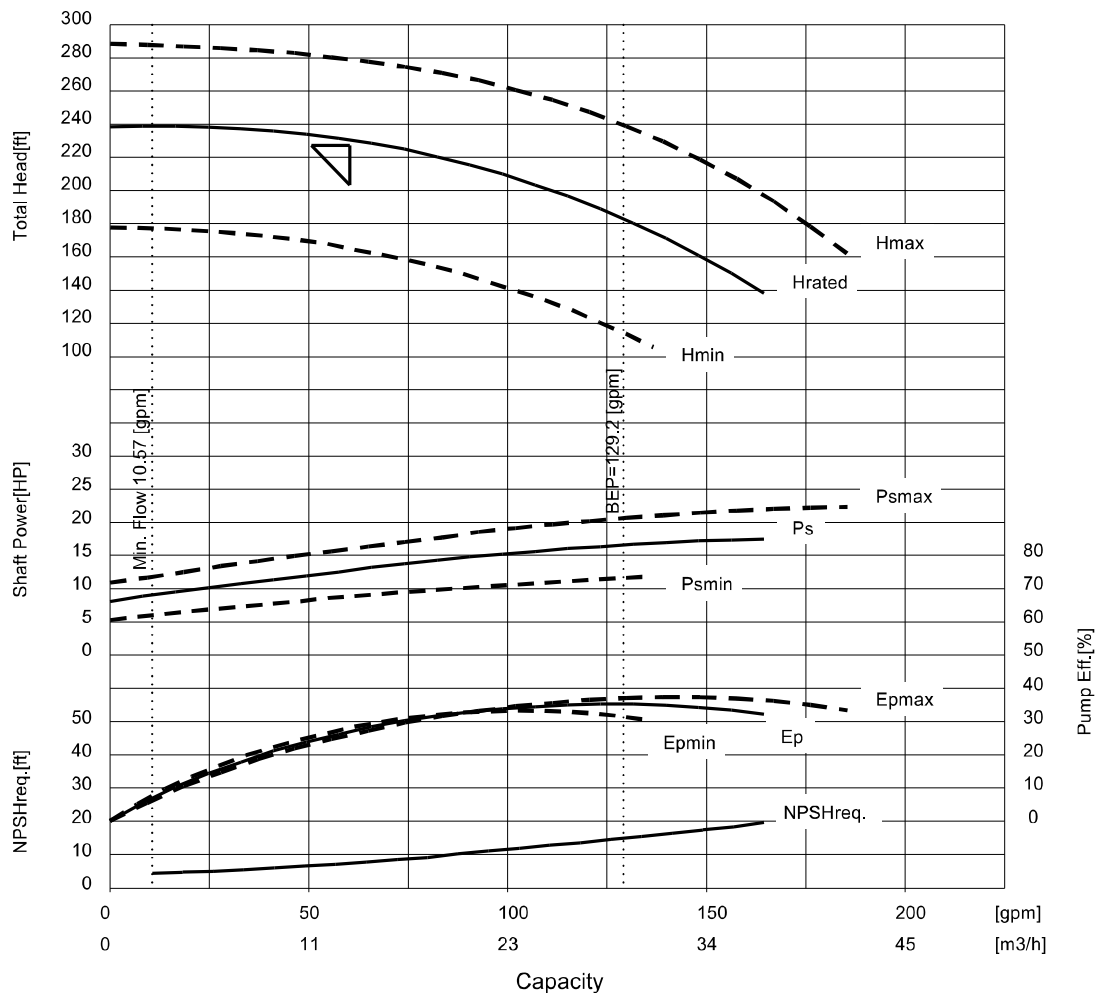
AS-BUILT

AS-BUILT**ESTIMATED PERFORMANCE CURVE**

Date : May. 24. 2022
No : U24P0052-01
Dwg. No. : SFP-1521A

Customer: World Energy Paramount
Equipment Owner: Air Products Manufacturing LLC
APCI No: EN207119-TEI-9V3-00024
Order No: 4505499561
Job No: A8KM
Project Name: World Energy Renewables Project
Item No: 18-P-360 A/B
Item Name: Wash Water Circulation Pump
Model: F98-417C4XM-0405T1V-A

Item No.	18-P-360 A/B	Item Name	Wash Water Circulation Pump
Model	F98-417C4XM-0405T1V-A		
Frequency	60 Hz	Total Head	226.8 ft
Voltage	460 V	Capacity	60.2 gpm 13.67 m3/h
Phase	3	Min.Flow	10.57 gpm 2.401 m3/h
Pole	2	Liquid	Sour Water
Output	20.1/15 HP/kW	Temp.	130 degF
Current	30 A	S.G.	0.99
		Vis.	0.53 mPas
		NPSHavail.	438.5 ft
		NPSHreq.	7.5 ft

**Remarks :**

- Shut-off head : 246ft
- 239ft, 35.8%, 10HP, 3527rpm @ rated flow
- 168gpm, 14.1HP @ EOC
- 17.38HP @ EOC (max. dia.)
- Ns : 705.7, SSS : 5457
- Impeller Dia(mm):208(Max)/ 192(Rated)/ 166(Min)
- Impeller Dia(in.):8.18(Max)/ 7.56(Rated)/ 6.54(Min)
- See Po Data Sheet of Expected Info.A8KM-18-89-540073-A PER
- Proposal Curve U24P0052-01

C	MAY.24.2022	Revised(K.Nagase)	
B	FEB.2.2022	Revised(K.Nakazumi)	
REV.	Date	Description	

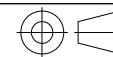
APPROVED BY	CHECKED BY	DRAWN BY
K.Akashi	M.Morii	K.Nagase

TEIKOKU ELECTRIC MFG. CO., LTD.

UNIS Version 3.6.8

NDTS12_05

6M-0962



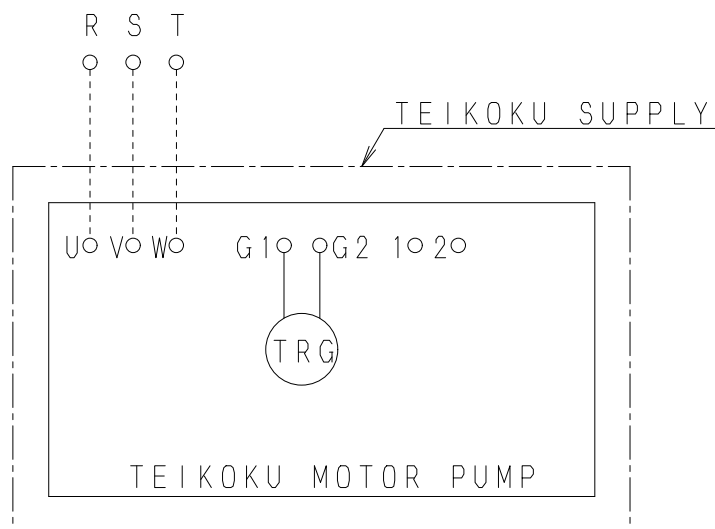
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SYMBOLS	NAME
R S T	POWER SOURCE
U V W	POWER TERMINAL
MC	MAGNETIC CONTACTOR
TRG	TEIKOKU ROTARY GUARDIAN (Bearing wear and rotating direction indicator.)

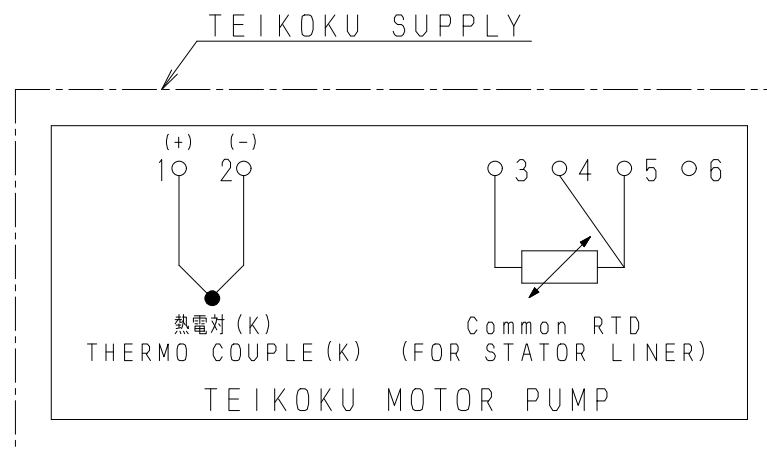
熱電対 THERMOCOUPLE	
耐熱クラス THERMAL CLASS	220
設定温度 SETTING CUTOFF TEMP.	190℃/374° F

RESISTANCE TEMPERATURE DETECTOR (RTD)	
ELEMENT	Pt100Ω at 0℃ (R100/R0=1.3851)
CLASS	A (IEC 60751)
LEAD CONNECTION	3 LEAD-TYPE
MEASURING CURRENT	< 1mA
TEMPERATURE RANGE	-94℃~+500℃
NUMBER OF ELEMENT	SINGLE

B



TERMINAL BOX-A (For power)
LEFT SIDE FROM PUMP SUCTION



TERMINAL BOX-B (For protection)
RIGHT SIDE FROM PUMP SUCTION

FP1521A

D

REVISED

B
Revised
Feb. 1' 22
E. Fujimura

AS-BUILT

APPROVED

CHECKED

DRAWN

K. Nagase
Nov. 12' 21

SCALE

FREE

DWG. TITLE

結線図

CONNECTION DIAGRAM

DWG. NO.

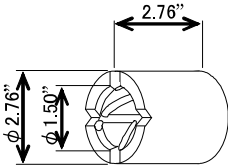
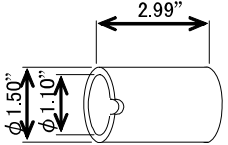
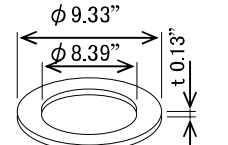
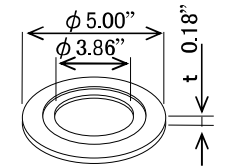
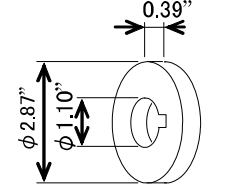
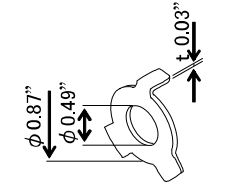
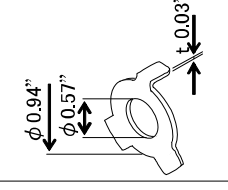


株式会社 帝国電機製作所
TEIKOKU ELECTRIC MFG. CO., LTD.

6M-0962

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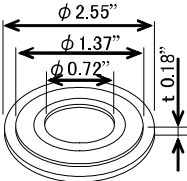
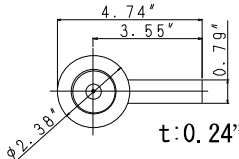
SPARE PARTS LIST

TYPE					SP-FP1521A		1
F 410-T							2
No.	PARTS NAME	DIMENSION	MATERIAL	FOR 1SETS	TOTAL	REMARKS	
1	BEARING A (with spiral & straight grooves)		SiC	2	8	#15A, #15A 70 × 38 × 70 (mm) ID No. 4D2033-01-4670	
2	SHAFT SLEEVE		ALLOY C-276 + Tun. Carbide	2	4	#17 38 × 28 × 76 (mm) ID No. 4C3488-01-8720	
3	GASKET		ALLOY C-276 + Grafoil	1	4	#66A 237 × 213 × 3.2 (mm) ID No. 4H1627-04-9890	
4	GASKET		ALLOY C-276 + Grafoil	1	4	#66B 127 × 98 × 4.5 (mm) ID No. 4H1670-03-9920	
5	THRUST COLLAR		ALLOY C-276 + Tun. Carbide	2	4	#18 73 × 28 × 10 (mm) ID No. 4C3491-01-8720	
6	LOCK WASHER		ALLOY C-276	1	2	#57A 22 × 12.5 × 0.8 (mm) ID No. 4S7840-01-4210	
7	LOCK WASHER		ALLOY C-276	1	2	#57B 24 × 14.5 × 0.8 (mm) ID No. 4S8495-01-4210	
REV.	© Rewritten Feb. 1'22 (K. Nagase)	 株式会社 帝国電機製作所 TEIKOKU ELECTRIC MFG.CO.,LTD.		APPROVED 	CHECKED 	DRAWN K. Nagase Nov. 12. '21	

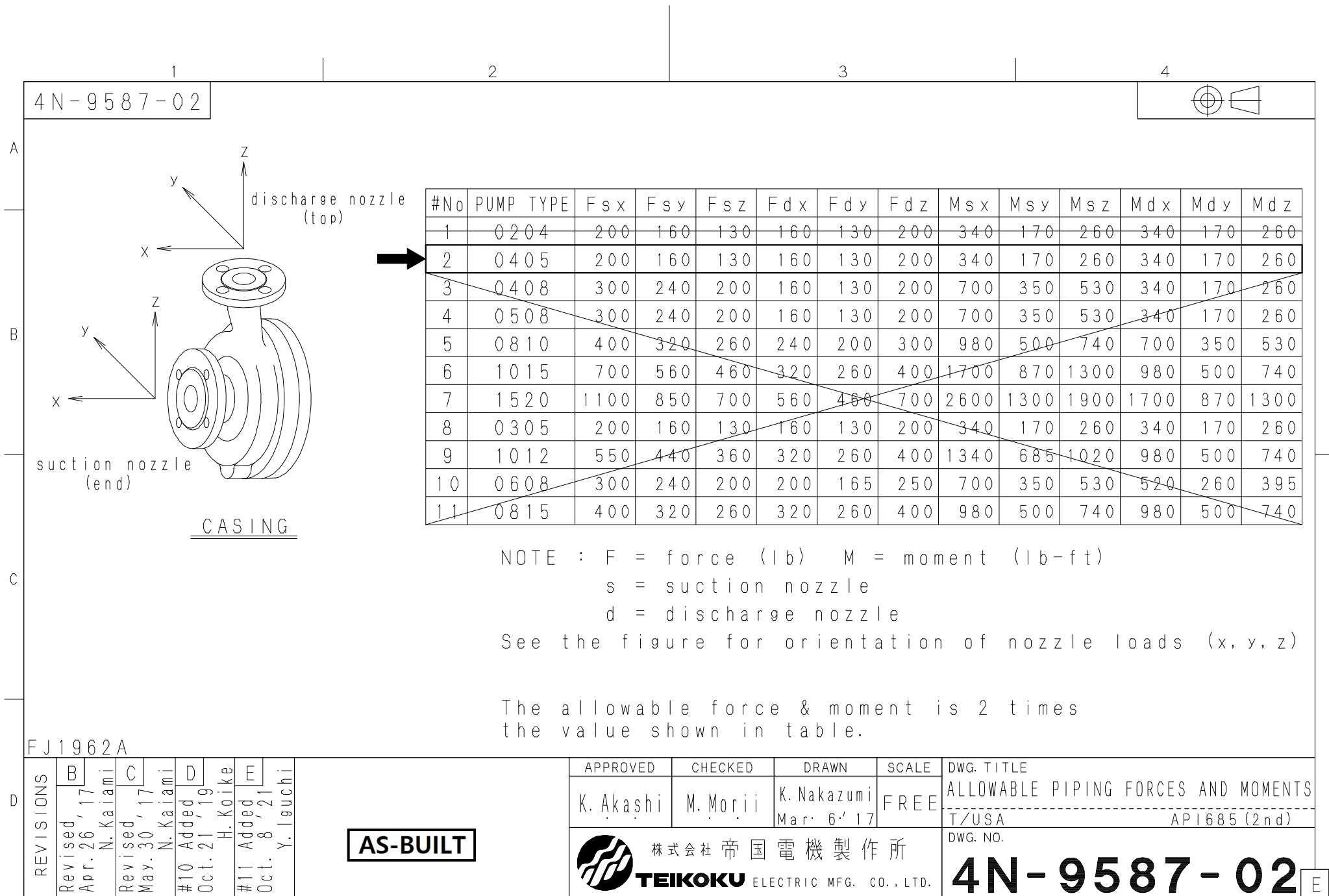
FP1521A

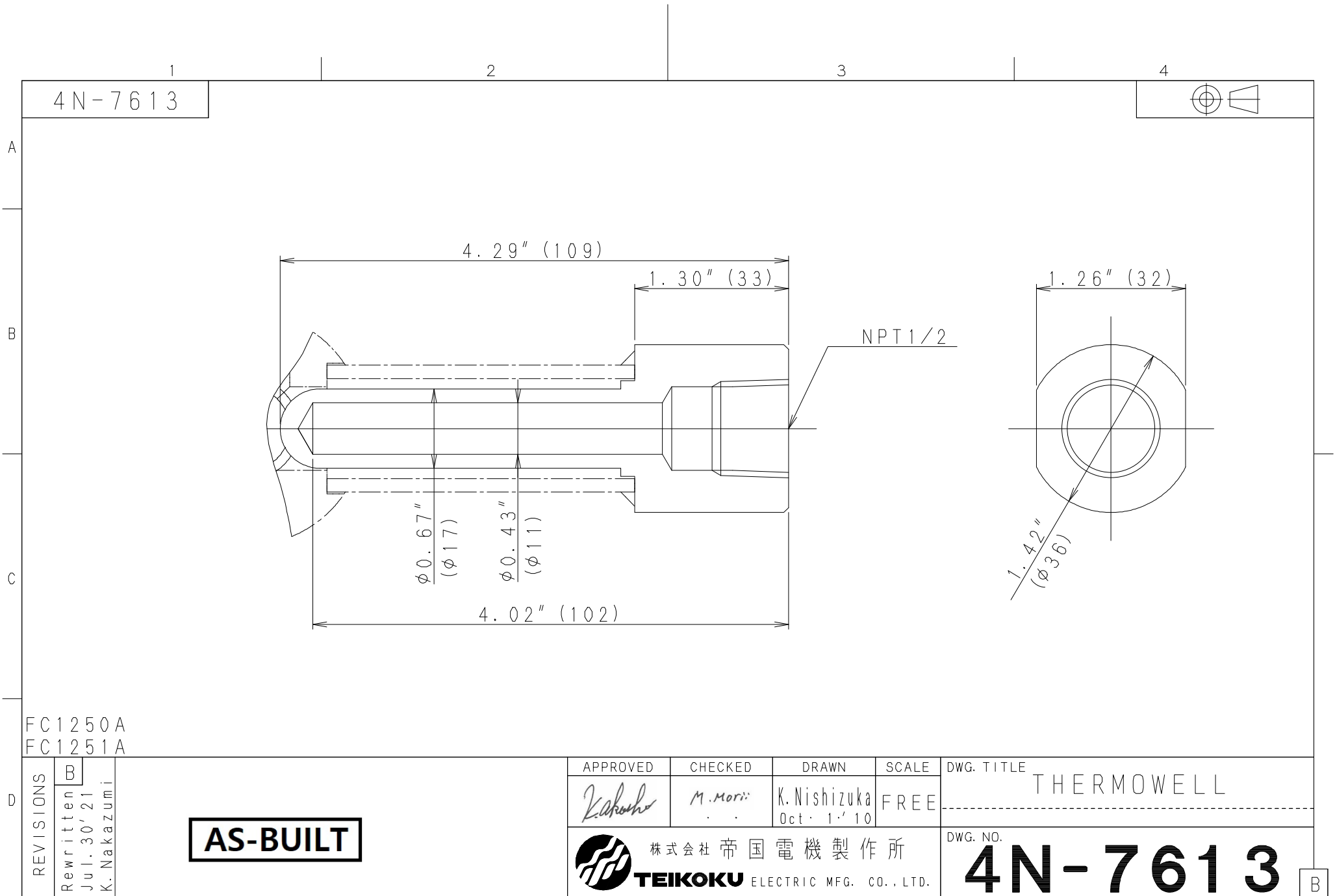
AS-BUILT

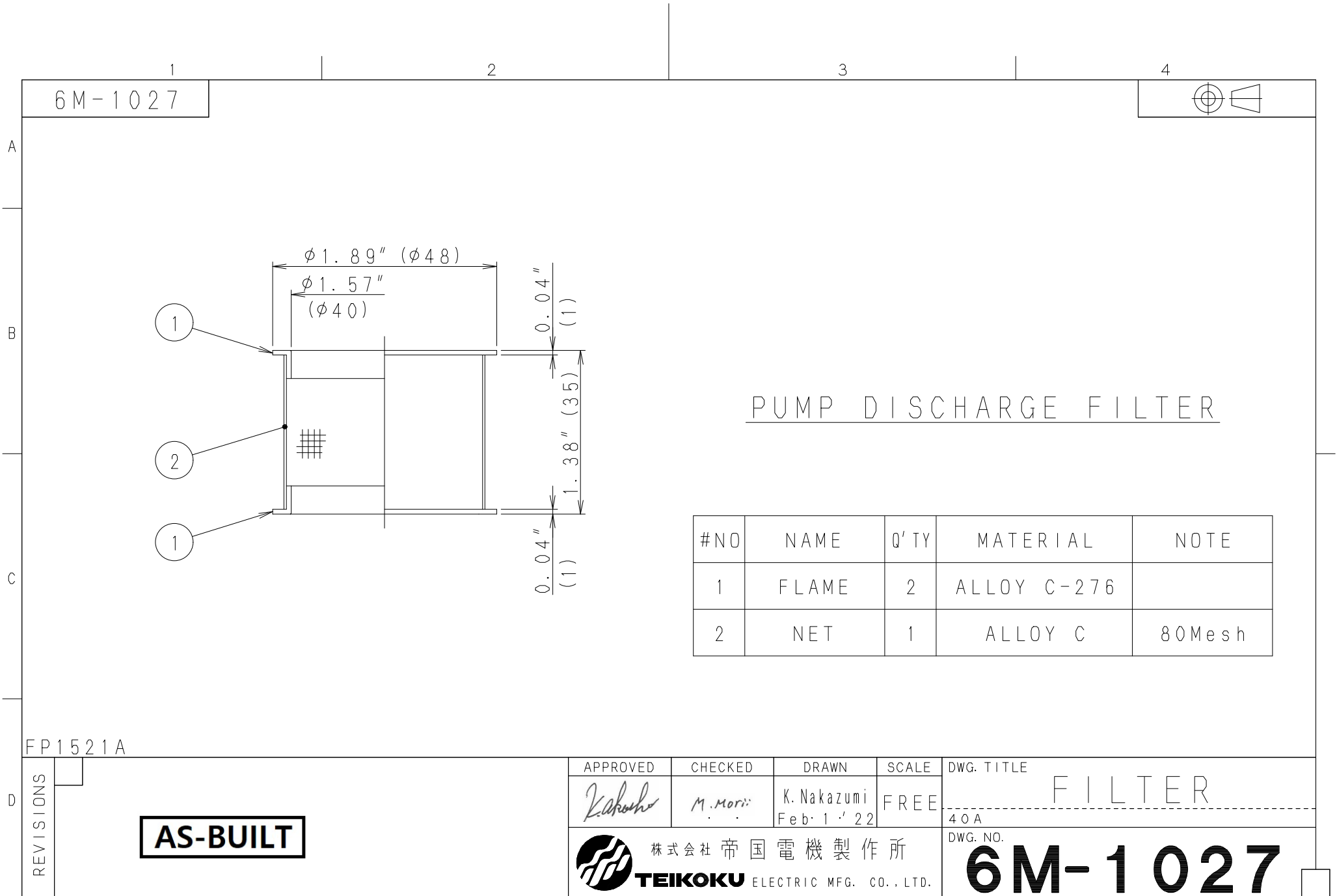
SPARE PARTS LIST

TYPE					SP-FP1521A		2
F 410-T							2
No.	PARTS NAME	DIMENSION	MATERIAL	FOR 1SETS	TOTAL	REMARKS	
8	GASKET		ALLOY C-276 + Grafoil	3	12	#66C 65 × 34.9 × 18.2 × 4.5 (mm) ID No. KQ17185-01	
9	ORIFICE		ALLOY C-276	1	2	#88 120.5 × 90 × 60.5 × 20 × 6 ID No. 4U8310G01-4200	
REV.		 株式会社 帝国電機製作所 TEIKOKU ELECTRIC MFG.CO.,LTD.		APPROVED	CHECKED	DRAWN	
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AS-BUILT







3M-9975



4.72"

**TEIKOKU
MOTOR PUMP**

TYPE F98-417C4XM	
-0405T1V-A	
ITEM NO.	A
HEAD	226.8 ft
CAPA.	60.2 GPM
3φ 60 Hz	460 V
OUTPUT	20.1 HP
AMP.	30 A
POLE 2	CLASS 220
PROD. NO.	B
DATE	2022.8
HAZARDOUS AREA CLASSIFICATION:	
Class I, Division 2, Groups A, B, C & D	
Temp Coded: T4	

1. DO NOT START PUMP WITHOUT LIQUID
 ADVERTISSEMENT: NE PAS COMMENCER LA
 POMPE SANS LIQUID UN SCAU EST.
 2. MAX. LIQUID TEMP. AT MOTOR INLET 195.8 °F
 3. MAX. WATER TEMP. FOR MOTOR COOLING - °F
 MIN. WATER FLOW FOR MOTOR COOLING - GPM

TEIKOKU ELECTRIC
MFG. CO., LTD.
JAPAN 4K-4580

2.28"

4-φ0.12"

#No	A	B	C
1	18-P-360 A	FP-1521A-1	7.60
2	18-P-360 B	FP-1521A-2	7.68

4.33"

PUMPED LIQUID : Sour Water	
PUMPING TEMP.	: 130 °F
RATED SPEED	: 3600 RPM
MAX. ALLOWABLE WORK. PRESS.	: 1160 psiG
TEMP. BASIS FOR M. A. W. P	: 500 °F
MAX. ALLOWED PUMP WORK. PRESS. AT DESIGN TEMP.	: 1160 psiG at 500 °F
MAX. ALLOWED MOTOR WORK. PRESS. AT DESIGN TEMP.	: 1160 psiG at 500 °F
HYDROSTATIC TEST PRESSURE.	: 1740 psiG
LOCKED ROTOR AMP.	: 136 A
IMPELLER DIAMETER	: C INCH
LIQUID TEMP.	: 130 °F
LIQUID S. G.	: 0.99
LIQUID VISCOSITY	: 0.53 cP
LIQUID SPECIFIC HEAT	: 1.024 BTU/lbmF
LIQUID VAPOR PRESS.	: 549.7 psiA
MOTOR THERMAL PROTECTION TEMP.	: 374 °F

TEIKOKU ELECTRIC
MFG. CO., LTD.
JAPAN

4.92"

4-φ0.12"

304 SS t=0.02"
(SUS304 t=0.5)

304 SS t=0.02"
(SUS304 t=0.5)

D FP1521A

REVISIONS	B	C
Revised		
Dec. 14 '22		
K. Nagase		
Revised		
Jan. 31 '23		
K. Nagase		

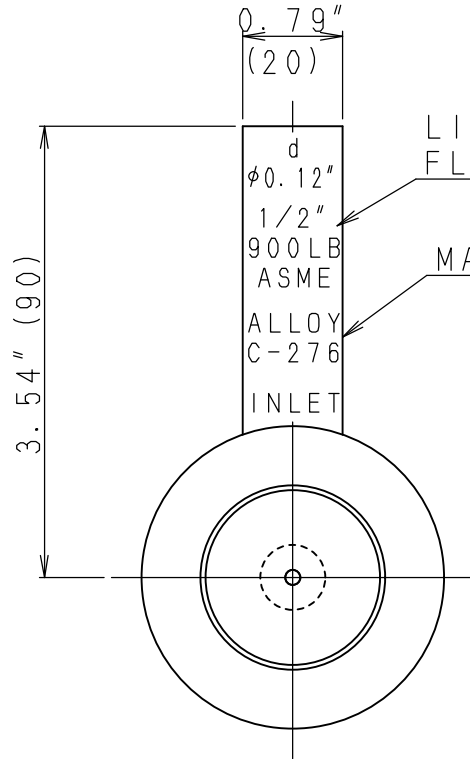
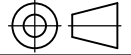


AS-BUILT

APPROVED	CHECKED	DRAWN	SCALE	DWG. TITLE
K. Akashi	M. Morii	K. Nagase May 24 '22	FREE	NAME PLATE
株式会社 帝国電機製作所 TEIKOKU ELECTRIC MFG. CO., LTD.				DWG. NO.
				3M-9975

FP1521A C

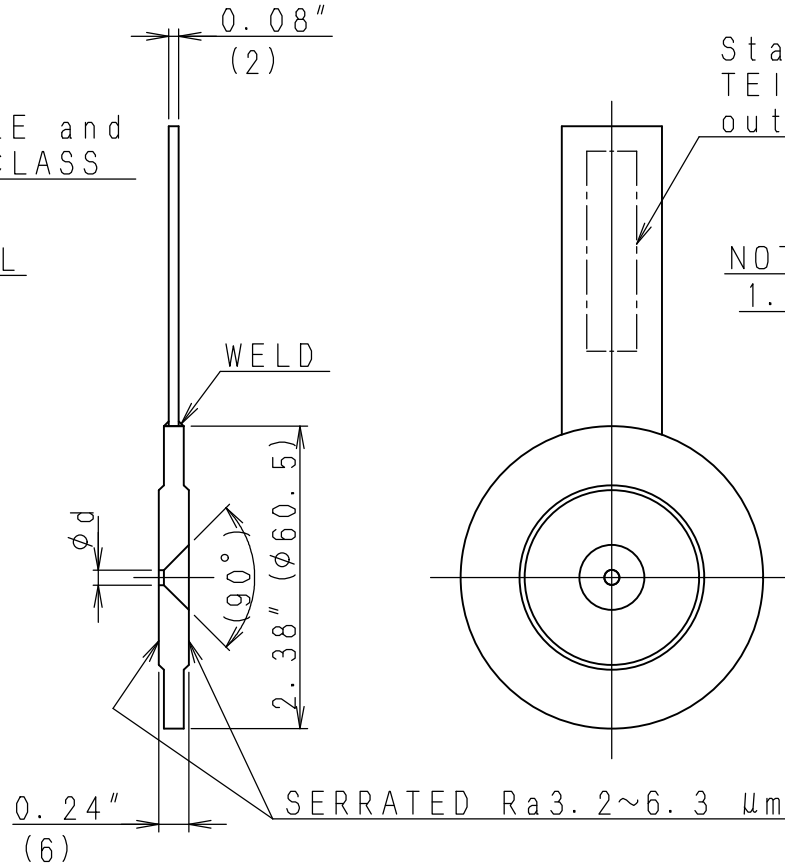
6M-1028

LINE SIZE and
FLANGE CLASS

MATERIAL

0.79"
(20) $\phi 0.12"$
1/2"
900LB
ASME
ALLOY
C-276
INLET

3.54" (90)

0.08"
(2)

WELD

2.38" (60.5)

SERRATED Ra 3.2~6.3 μm

0.24"
(6)Stamp Orifice Tag No. and
TEIKOKU Serial No. on the
outlet side

NOTE

1. MATERIAL---ALLOY C-276

Item No.	ϕd (in.)
18-P-360 A	0.12
18-P-360 B	0.12

FP1521A

REVISIONS

B

Revised
May. 24 '22
K. Nagase

C

Revised
Mar. 1 '23
K. Nagase

AS-BUILT

APPROVED

CHECKED

M. Mori

DRAWN

K. Nagase
Feb. 1 '21

SCALE

FREE

DWG. TITLE

ORIFICE

ASME 900Lb 1/2" RF

DWG. NO.



株式会社 帝国電機製作所

TEIKOKU ELECTRIC MFG. CO., LTD.

6M-1028

C