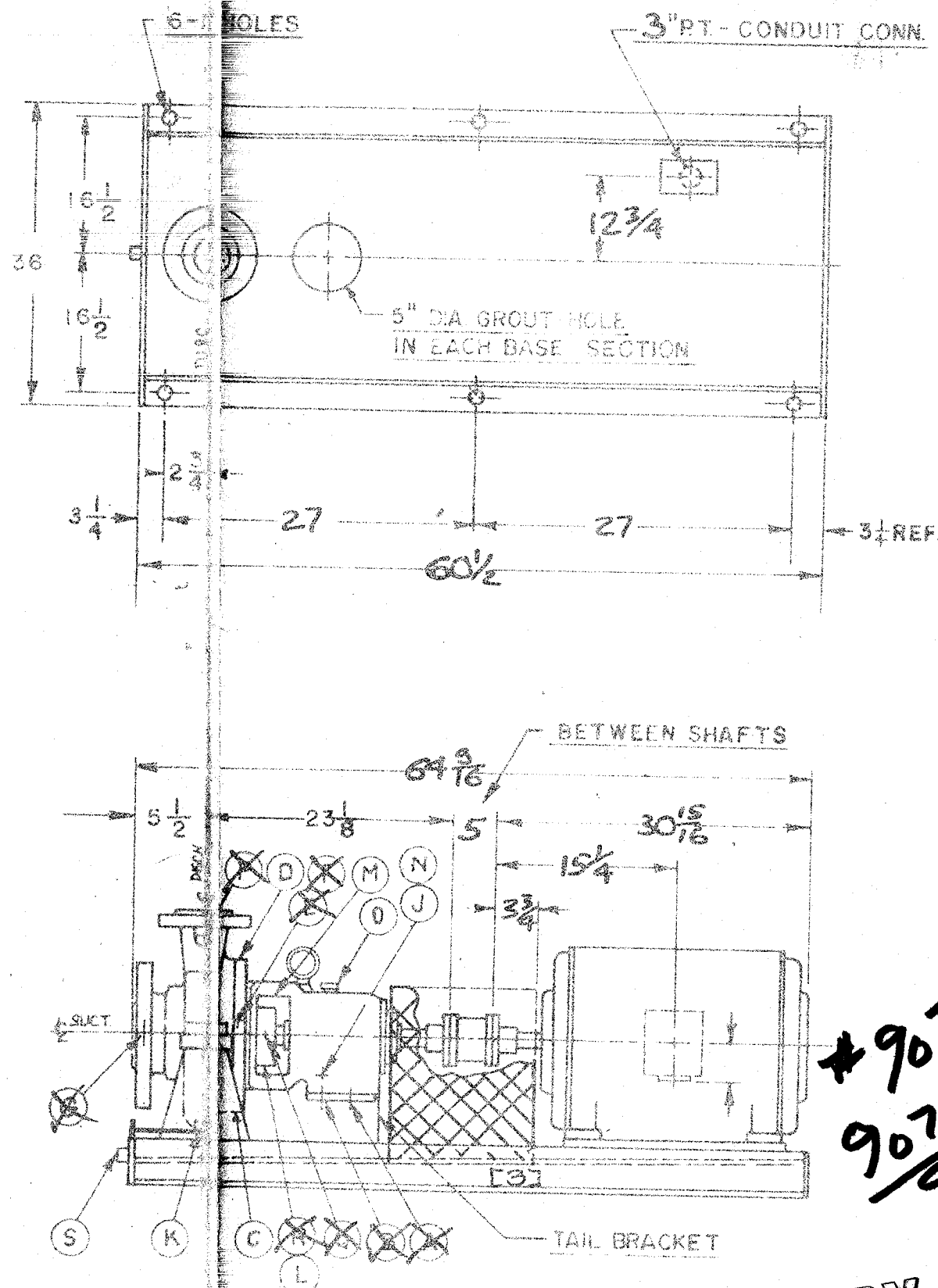
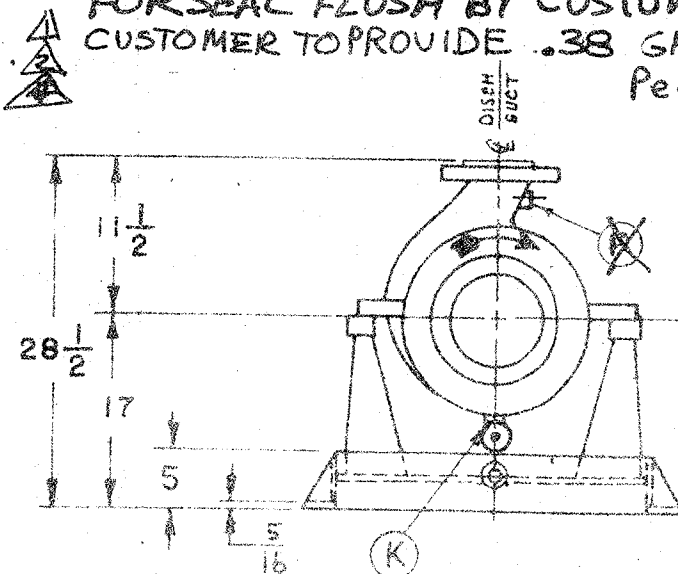


LEGEND			PIPE
ITEM	PIPE PLUG	PROTECTIVE CAP	TAP SIZE
A	BEARING HOUSING COOLING - INLET		1/2
B	BEARING HOUSING COOLING - OUTLET		1/2
C	STUFFING BOX COOLING - INLET		1/2
D	STUFFING BOX COOLING - OUTLET		1/2
E	SEALING LIQUID - INLET		1/2
F	SEALING LIQUID - OUTLET		1/2
G	BASE CONNECTION		1/2
H	PEDESTAL COOLING - INLET		1/2
I	PEDESTAL COOLING - OUTLET		1/2
J	OIL DRAIN (FAR SIDE)		1/4
K	PUMP DRAIN		3/4
L	BEARING BRACKET DRAIN OPEN CORE		1/2
M	FLUSHING LIQUID SEE NOTE "M"		1/2
N	CONSTANT LEVEL OILER NEAR SIDE		1/4
O	OIL INSPECTION HOLE COVER		
P	PUMP VENT & SEAL FLUSH SOURCE		3/4
Q	QUENCH IN AND OUT		1/2
R	GLAND DRAIN		1/2
S	BASE DRAIN		1

NOTE "M": SWAGELOCK SS 600-1-B

SEAL WELDED IN "M"
FOR SEAL FLUSH BY CUSTOMER
CUSTOMER TO PROVIDE .38 GPM FLUSH
Per Dura



B-22796X

UNIT DATA

PUMP SPECIFICATIONS

SIZE and TYPE: 3X4X11 1/2 CAP
NO. STAGES: 1 RPM: 3560
ROTATION: CCW (AS VIEWED FROM DRIVER)
DISCHARGE FLG: 3" - 300 # ANSI R.F.
SUCTION FLANGE: 4" - 300 # ANSI R.F.
MECH. SEAL: DURAMETALLIC
TYPE: PTO CODE: EUSE24NN
W/FLOATING BUSHING
NO. RINGS: SIZE:
ASSEMBLY:

COUPLING

TYPE: THOMAS DBZ-C 163
GUARD: PER SPE-4581-P-1
GALV. EXD. STEEL

DRIVER SPECIFICATIONS

MOTOR MAKE: G.E.
FURNISHED BY: BINGHAM
FRAME: 364TS
HP: 60 SPEED: 3600 RPM
460 VOLT, 3 PHASE, 60 CYCLE
DIMEN. PRINT: GEM-2290
GEAR:
TYPE:
FURNISHED BY:
DIMEN. PRINT:

WEIGHTS

PUMP: 400#
BASE: 296#
DRIVER: 734#
TOTAL: 1430#

CUSTOMER DATA

USER: MONSANTO CO.
FOR INSTALLATION AT: TEXAS CITY, TEXAS
PURCHASER: THE BADGER CO.
PURCHASE ORDER NO.: E4581-47
ITEM NO.: PP-118A / (51P11-13)
SERVICE: STRIPPER REFLUX

PUMP SIZE and TYPE: 3X4X11 1/2 CAP

PUMP SERIAL NUMBER(S)

FD-24231141/2

B-22796X

CAUTION! CAREFULLY CHECK ALIGNMENT BEFORE STARTING UNIT. ALL HOLES IN FLANGES STRADDLE CENTERLINES. UNIT SHOULD BE RELIEVED OF EXCESS PIPING.

Revise Rate

Extended Guard

Revise Note

[4] BY: RU

DATE: 9/29/75 [3] BY: RB

DATE: 6/11/75 [2] BY: RU

DATE: 7/14/75 [1] BY: RM

DATE: 1/18/75

REVISIONS

CERTIFIED FOR CONSTRUCTION

BY: RM

DATE: 12-19-74

DR: da

DATE: 8-28-73 CK

Bingham-Willamette Co.
PORTLAND, OREGON
SHREVEPORT, LOUISIANA

horizontal pump

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION BELONGING TO THE BADGER COMPANY INC. OR ITS AFFILIATED COMPANIES AND SHALL BE USED ONLY FOR THE PURPOSE FOR WHICH IT WAS SUPPLIED. IT SHALL NOT BE COPIED, REPRODUCED OR OTHERWISE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF THE BADGER COMPANY INC. OR IN PART TO OTHERS, EXCEPT IN ACCORDANCE WITH THE TERMS OF ANY AGREEMENT UNDER WHICH IT WAS APPLIED OR WITH THE PRIOR WRITTEN CONSENT OF THE BADGER COMPANY INC. AND SHALL BE RETURNED UPON REQUEST.

CENTRIFUGAL PUMP SPECIFICATION

#90707 & #90708

MONSANTO ITAM No. 51P11-1.2

Client MONSANTO Company

Item no. PP-118A1S

Unit AN PLANT No. 5

Location TEXAS CITY, TEXAS

1 Service STRIPPER REFLUX Pump Motor Drive YES Turbine Drive —
2 Pump Mfr. BINGHAM WILLIAMS Size & Type 3 x 4 x 11 1/2 CAP No. Req.'d 2

4 OPERATING CONDITIONS PERFORMANCE
5 Liquid 59% ORGANIC 41% WATER U.S. gpm at P.T. Nor. 140 Rated 220 Proposal Curve No. CA-307-2
6 Disch. Press. psig 140 NPSH Req.'d (Water) ft 8 1/2
7 Pump Temp. °F 105 Suct. Press. psig 7 No. of Stages 1 rpm 3560
8 Sp. Gr. at P.T. 0.82-1.0 Diff. Press. psi 133 Des. Eff. 48 bhp 43.4
9 Vap. Press. at P.T. psia 4.6 Diff. Head ft 295 Max. bhp Rated Imp. 57.4
10 Vis. at P.T. CP 0.3 NPSH Avail. ft at P.T. 15 Max. Head Rated Imp. ft. 405
11 Corr./Eros. Caused by Min. Continuous gpm (by Mfr.) 50

12 CONSTRUCTION & MATERIALS Rotation Facing Coupling End CCW
13 Casing-Mounting ☒ Centerline ☐ Foot ☐ Bracket ☐ Vertical
14 Split ☐ Axial ☒ Radial
15 Type ☒ Single Volute ☐ Double Volute ☐ Diffuser
16 Connect. ☐ Vent ☒ Drain 3/4" 300" RF
17 Nozzles Size ANSI Rating Facing Position Total Water Req.'d gpm 0
18 Suction 4 300 RF END SEAL FLUSH LIQUID - CONDENSATE
19 Discharge 3 300 RF TOP Flushing gpm 20 at 20 psig ABOVE SUCTION
20 Impeller Dia. Rated 9 3/4 Max. 11 1/2 Type ENCLOSED Seal Flushing EXTERNAL
21 Mfr.'s Bearing No. Radial Thrust Lube OIL Aux. Piping by PURCHASER (5)
22 Coupling and Guard: Mfr. THOMAS Base Plate STRAIGHT DRIP LIP Material
23 U Packing: Mfr. and Type Size No. of Rings Cooling Water ☐ Tubing ☐ Pipe
24 ☒ Mech. Seal: Mfr. and Model DUN PTFE Class Code EUSE24NN Seal Flush ☐ Tubing ☐ Pipe
25 For Vertical Pumps: Shaft Thrust (Up) (Down) lb. Shop Tests Required Witnessed

26 Material Code External Casing X Internal Parts X Run'g Perf. X No.
27 I-Cast Iron Internals Code N B S C X NPSH No. No.
28 B-Bronze Impeller I B S C X Disassembly No. No.
29 S-Steel Inner Case Parts I N S C X
30 C-11-13% Chrome Sleeve Packed Ch Ch Af Af Hydrostatic 900 psig
31 A-Alloy Sleeve Seal C C X Max. Allow., Case WP600 psig 400 °F
32 h-Hardened Wear Parts I B Ch Ch X Weights: Pump 400 Base 296
33 f-Faced Shaft S S S X (lb) Motor 134 Turbine —
34 X- 316 SS (Mech. Seal) Shipped
35 ☒ Installed ☐ Boxed Sep'tly

36 Motor Driver by Pump Mfr Item No. PP-118A1S Mtd. by Vendor hp 60 +15% Imp 2560 Frame 364TS
37 Mfr. GENERAL ELECTRIC Type K Insul. F Encl. TEFC Temp. Rise 40 °C
38 Volts/Phase/Cycles 460/3/60 Bearings BALL Lube GREASE Full Load Amps. 138.8
39 Turbine Driver by Item No. Mtd. by hp rpm Mat'l
40 Mfr. Final Data (as Built) Actual Impeller Dia. 9 3/4" Test Curve No. 8-2386
41 Outline Dwg. No. PD 24231141/2 Pump Sect. Dwg. No. Seal Diam. Dwg. No. 20-133558
42 Pump Serial No. 24231141/2 WR Clearance Diam.
43 API Spec. 610 Govern Yes ☒ No ☐ NOISE - SPE-4501-GN-1

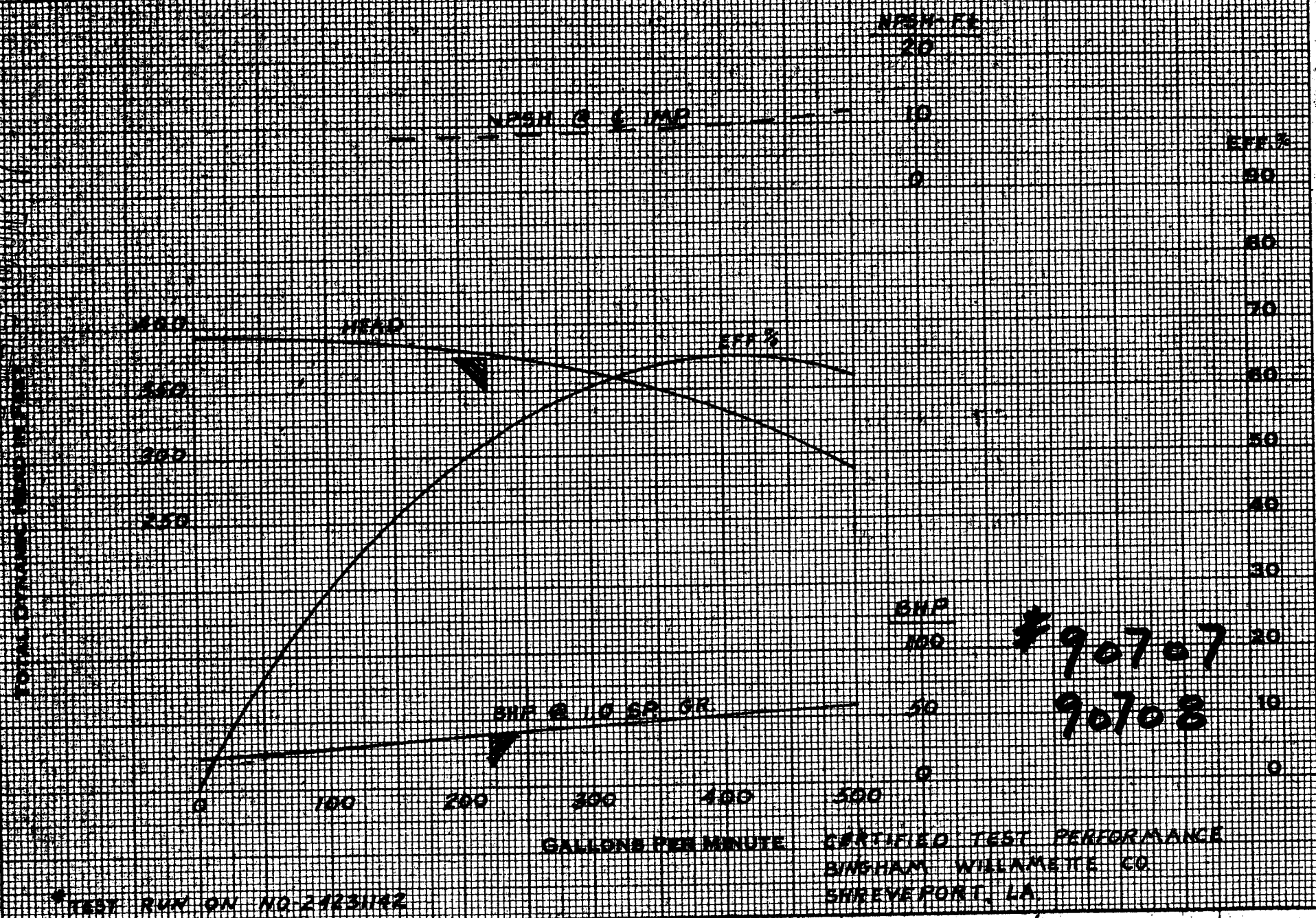
44 Remarks: (1) RESEARCH SPRES - Pumps - SPE-4501-P-1 Motors - SPE-4501-E-13
45 (2) LETHAL SERVICE - USE MC ARRANGEMENT No. 24 WITH FLOATING CARBON BUSHING
46 (3) NO SCREWED CONNECTIONS TO CONTACT PUMPED LIQUID
47 (4) NO COPPER OR COPPER BEARING ALLOYS TO CONTACT PUMPED LIQUID
48 (5) Aux. piping below Plan 34 BY PURCHASER
49 (6) PAINT - MFR'S STD.
50 (7) PUMP IS SELF-VENTING

51
52
53

THE BADGER COMPANY, Inc. ISSUE DATE 2/3-76 SHEET 2 OF 4 SPE-4501-P-118

5-2386

LINE 00000



*TEST RUN ON HQ-2123142

CERTIFIED TEST PERFORMANCE
BINGHAM WILLAMETTE CO.
SHREVEPORT, LA.

BADGER / MONSANTO CO. 59% ORGANIC / 41% H ₂ O STRIPPER REFLUX PUMP BADGER ITEM: EP-HBA/9 MONSANTO ITEM: BIP11-12 SERIAL NO. 24231141/2* PURCH. ORD. E4581-47	CHARACTERISTIC CURVE SHEET PUMP ENGINEERING DEPT. BINGHAM-WILLAMETTE COMPANY PORTLAND, OREGON & SHREVEPORT, LA. W.D. 10/21/75 DESIGNED NOMINATURE 12/24/75 RV	<table><tr><td data-bbox="1117 1388 1287 1469">IMPELLER MAX. DIA. 11 1/2" MIN.</td><td data-bbox="1287 1388 1723 1437">3 X 4 X 11 1/2 CAP</td><td data-bbox="1723 1388 1989 1437">PUMP</td></tr><tr><td data-bbox="1117 1469 1287 1518">DIA. EYE 14.2 AREA IN.</td><td data-bbox="1287 1469 1500 1518">DIA. IMPELLER. 9 3/4"</td><td data-bbox="1500 1469 1723 1518">IMPELLER PATT. 313 CAP-4</td></tr><tr><td data-bbox="1287 1518 1500 1567">SQ. N.P.S.H. REQUIRED</td><td data-bbox="1500 1518 1723 1567">REFERENCE</td><td data-bbox="1723 1518 1989 1567">3560 R.P.M. CURVE NO. S-2386</td></tr></table>	IMPELLER MAX. DIA. 11 1/2" MIN.	3 X 4 X 11 1/2 CAP	PUMP	DIA. EYE 14.2 AREA IN.	DIA. IMPELLER. 9 3/4"	IMPELLER PATT. 313 CAP-4	SQ. N.P.S.H. REQUIRED	REFERENCE	3560 R.P.M. CURVE NO. S-2386
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