FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules and the National Board

B3-3600

1. Manufactured by Arthur F. Smith, Inc. 201 S. W. 12th Avenue-Pomp. Bch, Florida (Name and address of Manufacturer) Pos.# B3 3600 #99695

2. Manufactured for Hoffmann-La Roche, Nutley, New Jersey 07110 (Name and address of Purchaser)

3. Type Vert. (Horiz. or Vert.) Kind Jacketed (Tank, Jacketed, Heat Exch.) Vessel No. (7650) (Mfrs.' Serial) (Fla.) (State & State No.) Nat'l Bd. No. 9 Yr. Built 1971

Items 4-9 incl. to be completed for single wall vessels (such as air tanks), jackets of jacketed vessels, or shells of Heat Exchangers

4. SHELL: Material SA 285 C (Kind and Spec. No.) T.S. 55,000 (Fig. or F. B. & Spec. Min. T.S.) Nominal Thickness 1/2 in. Corrosion Allowance in. Diam. 3 ft. 5 in. Length 10 ft. 1 1/4 in.

5. SEAMS: Long Dbl. Wld. Butt (Welded, Dbl., Single, Lap, Butt) H.T. No (Yes or No)[1] X.R. No Sectioned No Efficiency 70 %

Girth H.T. X.R. Sectioned No. of Courses

If riveted describe seams fully on reverse side of form

6. HEADS: (a) Material SA 285 C T.S. 55,000 (b) Material T.S.

Location (Top, bottom, ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)								
(b)								

If removable, bolts used (Material, Spec. No., T.S., Size, Number) Other fastening (Describe or Attach Sketch)

7. STAYBOLTS: None (Material) If hollow (Size of Hole) Attachment (Threaded, Welded) Pitch (Horiz.) X (Vert.) Diam. (Nominal)

8. JACKET CLOSURE: Jacket End Rings: SA 285 C; 55,000 psi; 1/2 Nom. Thk.; 1" I.R. Str. Flange (Describe as ogee & weld, bar, etc. If bar give dimensions, if bolted, describe or sketch)

9. Constructed for max. allowable working press.[2] 225 psi. at max. temp. 700° F Min. temp. (when less than — 20°) °F. Hydrostatic / Pneumatic / Combination Test Press. 350 psi.

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material (Kind & Spec. No.) Diam. (Subject to Pressure) in. Thickness in. Attachment (Welded, Bolted)

Floating. Material (Kind & Spec. No.) Diam. in. Thickness in. Attachment

11. TUBES: Material (Kind & Spec. No.) O.D. in. Thickness inches or gage. Number Type (Straight or U)

Items 12-15 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

12. SHELL: Material SA 264 (Kind and Spec. No.) T.S. 55,000 (Fig. or F. B. & Spec. Min. T. S.) Nominal Thickness 15/16 in. Corrosion Allowance 7/8 in. Diam. 3 ft. in. Length 10 ft. 8 in.

13. SEAMS: Long Dbl. Wld. Butt (Welded, Dbl., Single, Lap, Butt) H.T. No (Yes or No)[1] X.R. No (Spot or Complete) Sectioned No (Yes or No) Efficiency 70 %

Girth 304 ELC H.T. X.R. 304 ELC Sectioned No. of courses

If riveted describe seams fully on reverse side of form

14. Heads (a) Material SA 240 T.S. 70,000 (b) Material SA 240 T.S. 70,000 (c) Material T.S.

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) Top, ~~bottom, ends~~	3/8	36	2 1/4					Convex
(b) ~~Channel~~ Bottom	3/8	38	3					Convex
(c) Floating								

If removable, bolts used (a) 304 s/s; 20,000; 1" - 12 (b) 304 s/s; 20,000 - 1" - 8 (Material, Spec. No., T.S., Size, Number)

(c) Other fastening (Describe or Attach Sketch)

15. Constructed for max. allowable working press.[2] psi. at max. temp. °F Min. temp. (when less than — 20°) °F. Hydrostatic / Pneumatic or Combination Test Press. psi.

Items below to be completed for all Vessels where applicable.

16. SAFETY VALVE OUTLETS: Number 1 Size 1 1/2" Location Upper End of Shell

17. NOZZLES:

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Inlet	1	1 1/2"-Sch. 40	Flgd. Pipe	SA-53	.145	None	Welded
Outlet	1	1 1/2"-Sch. 40	Flgd. Pipe	SA-53	.145	None	Welded
Drain	1	3/4"-3000 lbs.	Coupling	SA-53	.1625	None	Welded

18. INSPECTION OPENINGS: Manholes, No. Size Location

Handholes, No. Size Location

Threaded, No. Size Location

19. SUPPORTS: Skirt (Yes or No) Lugs 4 (Number) Legs None (Number) Other None (Describe) Attached ~~To Jacket~~ Welded (Where & How)

20. REMARKS: Molecular Distillation Unit with Steam Pressure Jacket. Internal pressure varies from atmosphere to 10 microns (15 psi).

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents of each part.)

[1] If Postweld Heat-Treated

[2] List other internal or external pressures with coincident temperature when applicable.

(Over)

CPCo 10M—7-65

EVR 152

99695

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this unfired pressure vessel conform to the ASME Code for Unfired Pressure Vessels.

Date. April 23 19. 71 Signed.... Arthur F. Smith, Inc. ..... By James La Valley
Manufacturer James La Valley

Certificate of Authorization Expires..... November 12, 1971.....

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY ...Arthur F. Smith, Inc. ..... at. Pompano Beach, Flotida

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of. Florida and employed by. Maryland Casualty Compan. ..... of. Baltimore, Md. have inspected the pressure vessel described in this manufacturer's data report on April 23.....19.71.., and state that to the best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date. April 23, ... 19.71..

..... John P. Shaw .. Commissions ..... 5579 .....
Inspectors Signature Nat'l Board or State and No.

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

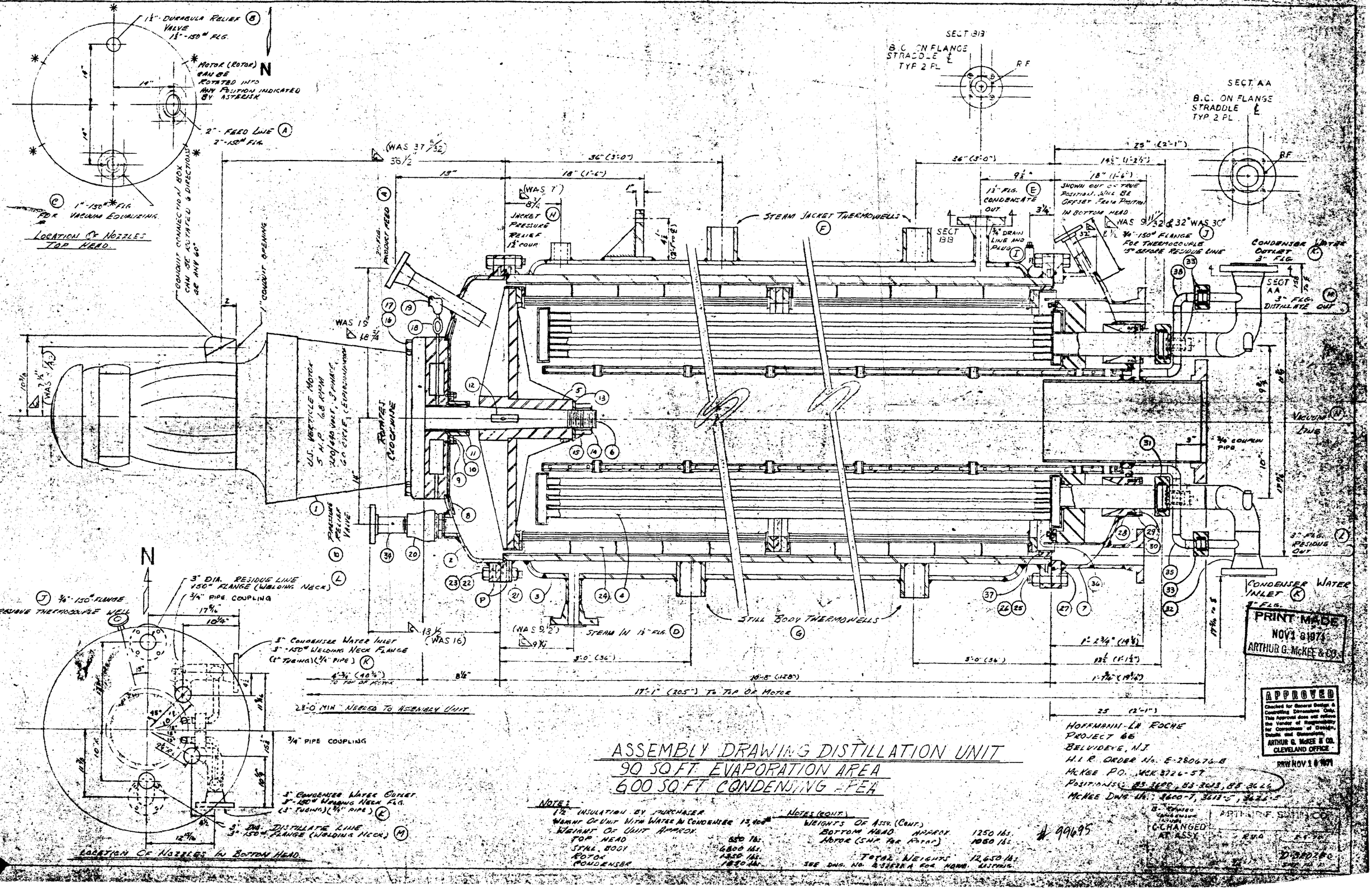
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of..... and employed by.....
of..... have compared the statements in this manufacturer's data report with the described pressure vessel and state that parts referred to as data items....., not included in the certificate of shop inspection have been inspected by me and that to the best of my knowledge and belief the manufacurer has constructed and assembled this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code. The described vessel was inspected and subjected to a hydrostatic test of.....psi.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date..... 19.....

..... Commissions .....
Inspectors Signature Nat'l Board or State and No.

EVR-152



ASSEMBLY DRAWING DISTILLATION UNIT
90 SQ FT EVAPORATION AREA
600 SQ FT CONDENSING - FEA

NOTE:
½" INSULATION BY PURCHASER

WEIGHT OF UNIT WITH WATER IN CONDENSER	13,400#
WEIGHT OF UNIT APPROX.	
TOP HEAD	650 lbs.
STILL BODY	6800 lbs.
MOTOR	1250 lbs.
CONDENSER	1850 lbs.

NOTES (CONT.)

WEIGHTS OF ASSY. (CONT.)	
BOTTOM HEAD APPROX.	1250 lbs.
MOTOR (SHIP FOR REPAIR)	1060 lbs.
TOTAL WEIGHTS	12,650 lbs.

SEE DWG. NO. A-32828 A FOR NAME LISTING.

HOFFMANN-LA ROCHE
PROJECT 66
BELVIDERE, N.J.
H.I.R. ORDER No. E-280676-B
McKEE P.O. MCK 3726-57
POSITIONS: B3 3602, B3 3603, B8 3624
McKEE DWG. No.: 3600-7, 3603-5, 3624-5

PRINT MADE NOV 1 81971 ARTHUR G. McKEE & CO.

APPROVED Checked for General Design & Controlling Dimensions Only. This Approval does not relieve the Vendor of Responsibility for Correctness of Design, Details and Dimensions. ARTHUR G. McKEE & CO. CLEVELAND OFFICE
RRW NOV 1 8 1971

B. Revised Valve Assembly | ARTHUR G. McKEE & CO.
C. CHANGED AT ASSY. R.V.G. 8-5-70

99695

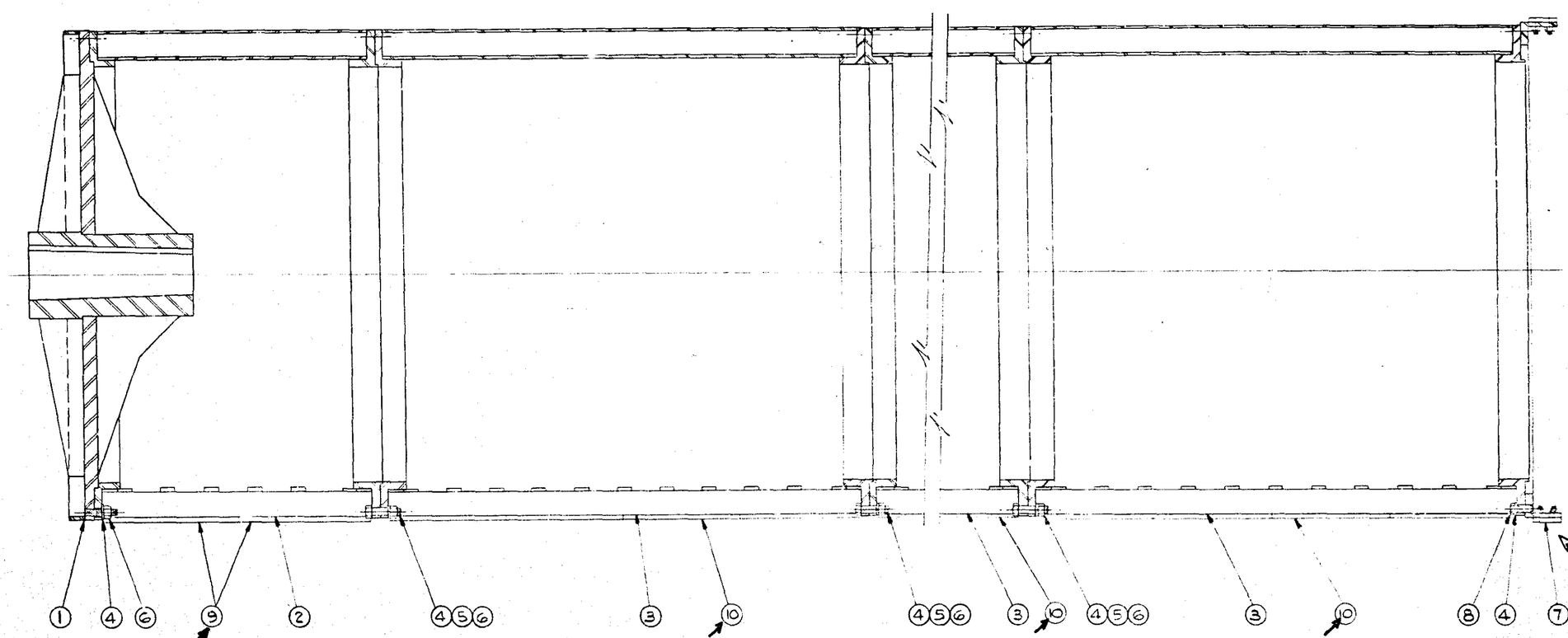
D-32828 C

EVP-132

B3-3600

EQUIP. CODE NO. E V P 152

1	1	——	SH# 2	ROTOR, SS316L
2	1	——	SH#3	RETAINER WIPER & SEPARATOR ASSY.
3	3	——	SH#4	RETAINER WIPER & SEPARATOR ASSY.
4	60	611588	——	WASHER, SPRING LOCK, SS316, ½" LIGHT
5	36	602010	——	BOLT, HEX. HD., FIN., SS316, ½"-13 x 1½" LG.
6	60	601819	——	NUT, HEX, SS316, ½"-13
7	1	——	SH#5	RING, MTG., WEAR BLOCK
8	12	602126	——	BOLT, HEX. HD., FIN., SS316, ½"-13 x 1" LG.
9	8	——	SH#6	BLADE, WIPER, RULON P, 9½" LG. 014-8
10	48	3214087	3214087	BLADE, WIPER, RULON P, 8¼" LG. 014-48



CUSTOMER: HOFFMANN-LA ROCHE INC.
ADDRESS: NUTLEY, N.J.
CONSIGNEE: HOFFMANN-LA ROCHE INC.
ADDRESS: BELVIDERE, N.J.
CUSTOMER ORDER NO.: E664483 B

TAG: B3-3600 CODE: EVP-152

ROTOR ASSY., S.S. 316L
FOR 90 SQ.FT. EVAPORATOR

REFERENCES
3213211
C/N #1

PFAUDLER
DIVISION OF SYBRON CORPORATION
ROCHESTER N.Y. & ELYRIA, OHIO U.S.A.
SYBRON Pfaudler

SCALE 3"=1'-0"
DRAWN BUTLER DATE 11-3-72
CHECKED MZ DATE 11-14-72

539

R578-0408

B3-3600
EVP-152
#99695