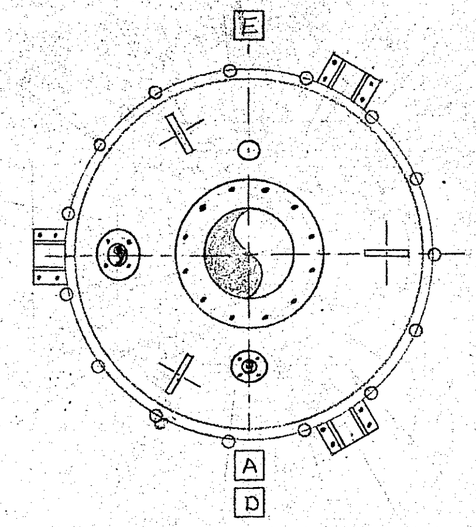
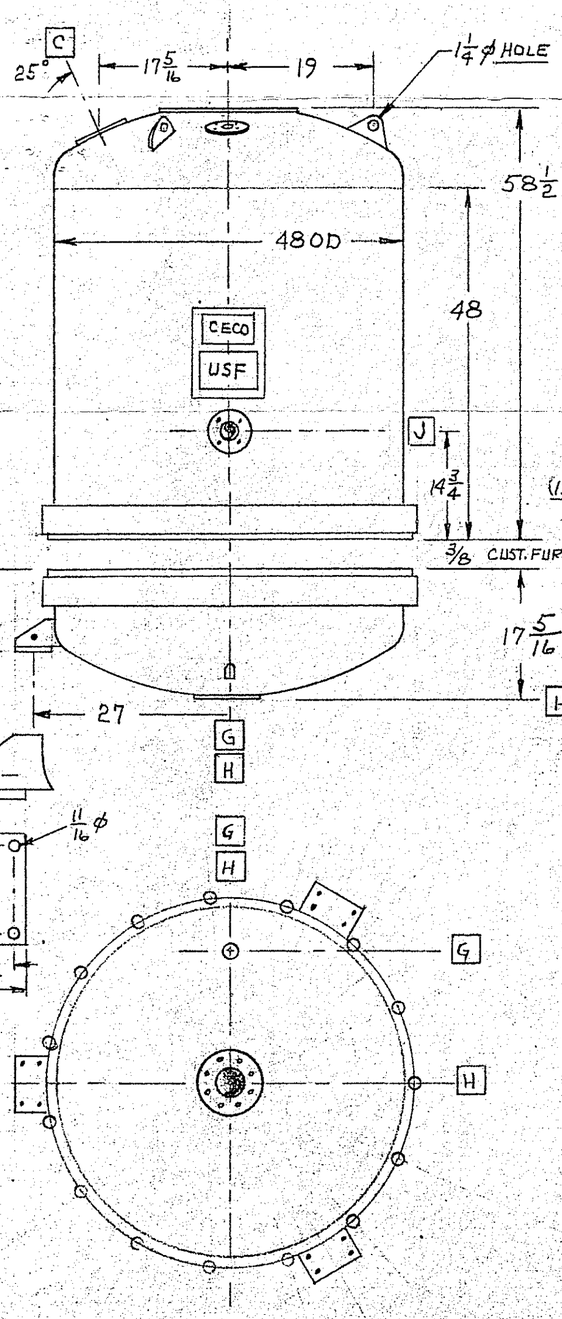
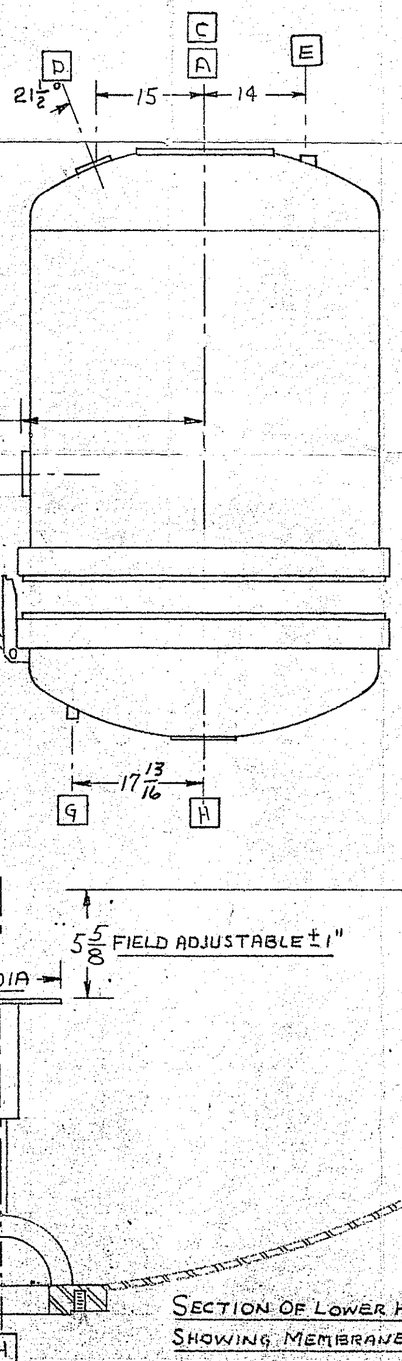
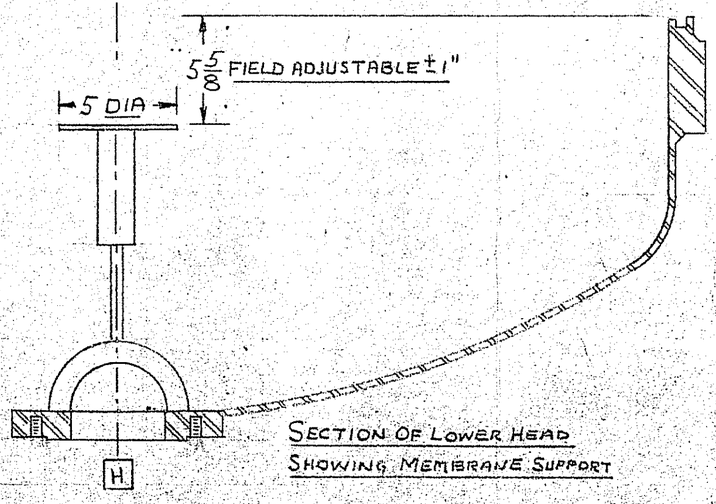
REVISIONS				
CHANGE LETTER	DESCRIPTION	BY	DATE	APPROV.
A	COMPLETE REDESIGN	HTE	5/28/71	
B	REDESIGNED	HTE	7/15/71	
C	ADDED MEMBRANE SUPPORT	HTE	8/13/71	
D	REVISED TO AS BUILT	HTE	12/14/71	

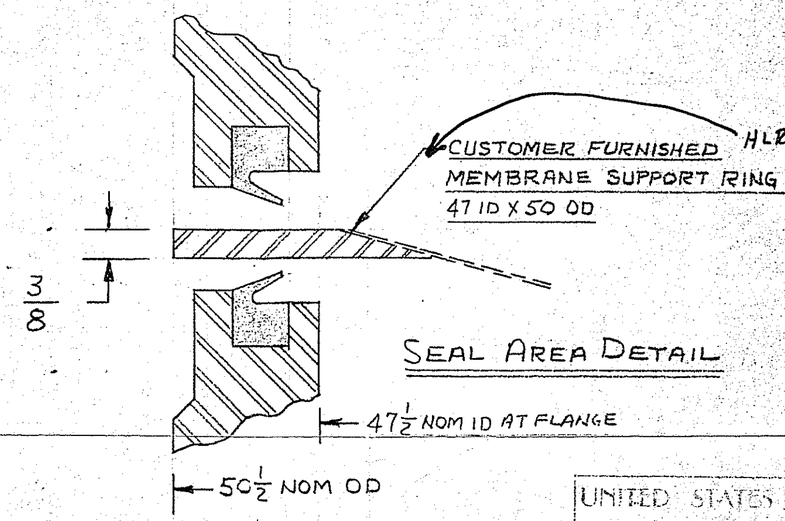








SECTION OF LOWER HEAD
SHOWING MEMBRANE SUPPORT



SEAL AREA DETAIL

NOTES:
1. NOZZLE LOCATION TOLERANCE IS ± 1/4".
2. INTERNAL SURFACES ARE #4 AND/OR 2B FINISH.
3. INTERNAL WELDS GROUND & POLISHED.
4. OUTER STAINLESS SURFACES ARE MILL FINISH.
5. OUTSIDE WELDS GROUND ONLY.
6. UNTHREADED EXTERNAL CARBON STEEL PARTS ARE PAINTED WITH WHITE EPOXY.
7. SHELL MAY BE ROTATED TO ANY ANGLE WITH RESPECT TO DOOR.

UNITED STATES FILTER CO.
Certified Drawing
By H.T. Edwards Date 8/13/71

J	2	150 RF	
H	4	150 RF	
G	1/4	NPT	
E			CUSTOMER FURNISHED
D	1 1/2	150 RF	
C	3	150 RF	
A	12	150# RF	
MK	SIZE	TYPE	FUNCTION

CONNECTION SCHEDULE

CUSTOMER: CONSOLIDATED ENG. CORP / HOFFMAN LA ROCHE
FILTER LOCATION:
CUSTOMER'S P.O.: B2012 - J162 FILTER MODEL: NO. OF LEAVES: NONE
DIAMETER - FRONT: 48" OD DIAMETER - REAR: 48" OD LEAF SPACING: ——
CODE - ASME/~~NONE~~ - STAMPED: YES/~~NO~~
DESIGN PRESSURE @ TEMP.: 100 PSI @ 150° F.
MAT'L: VESSEL SA240 316L W STL FLANGES INTERNALS 316L
LINING TYPE: NONE
WEIGHT: EMPTY 1425 LBS. OPERATING LBS.

REQ'D.	PART NO./NAME	DESCRIPTION	MATERIAL	ITEM
1	180 /PURGE NIPPLE			4
2	162 /GASKET		BLACK O&T NEOPRENE	3
1	737 /DOOR			2
1	800 /SHELL			1

BILL OF MATERIALS

RECEIVED — A.F.W. BERGOO — CIRC. TO | COPIES TO — JUN 8 19 — INITIAL & RETURN TO E.W.B.

J1216

SCALE	NONE		
N/A.DWG.			
DRAFTSMAN	EDWARDS	5/28/71	
ENGINEER	✓	✓	
CHECK	HTE	11/20/71	

250 ✓ UNLESS SPECIFIED

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REMOVE BURRS ✓
SHARP CORNERS ✓

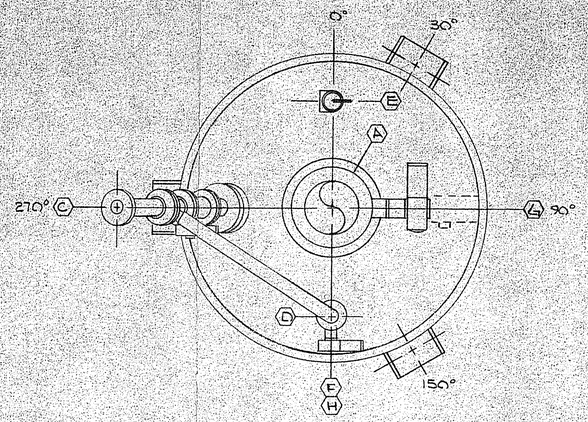
USF UNITED STATES FILTER

TITLE VESSEL ASSY-J1216 DWG. SIZE C DWG. NO. 900 LTR. D CHG.

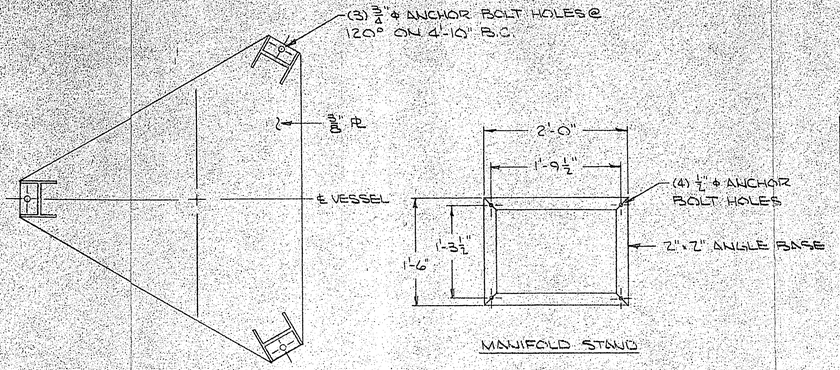
[redacted] CNV-194 #108363

2-71 DIETERICH-POST CLEARPRINT 1020-8

No.	Date	Revision	By
1	7-16	REDRAWN	JJ
2	2-18	REV PER APPROVAL DWG	JJ



PLAN



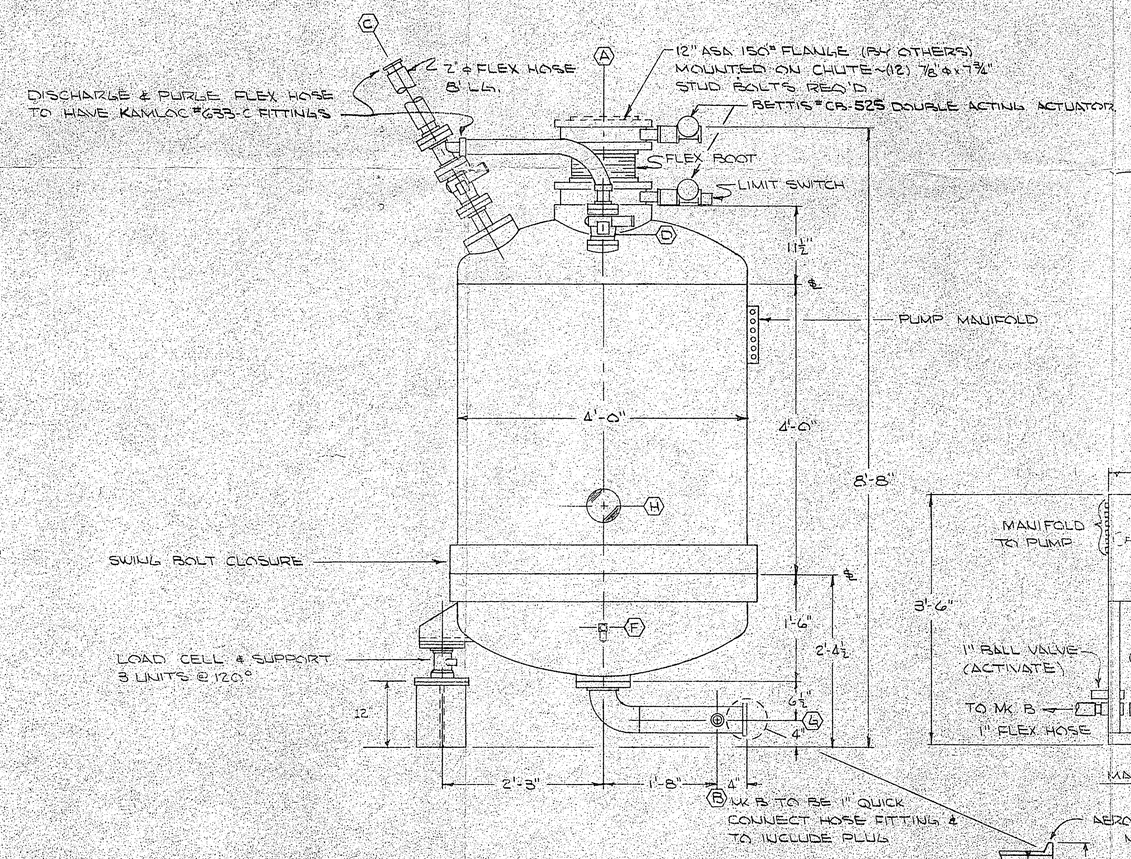
VESSEL BASE PLATE

MANIFOLD STAND

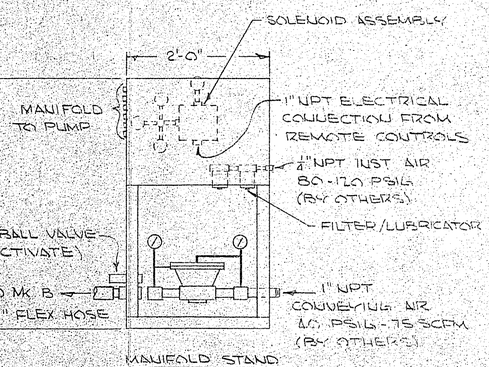
Design Characteristics	
Code Per ASME Section VIII	Code Stamp Required : YES
Radiograph:	Hydrotest: 150 PSIG
Design Pressure: 100 PSIG	Average Operating Pressure:
Design Temperature: 150° F	Average Operating Temperature: AMB
MAWP: 100 PSIG @ 150° F	Corrosion Allowance: NONE
Serial No.: SEE NOTE 2	Year Built: 1971
See Design Data Sheet	

Schedule Of Openings

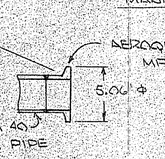
MK	Size	Type	Items	Purpose
A	12"-FLG'D	BUTTERFLY		FILL
B	1"-SCRW'D	BALL VALVE		ACTIVATE
C	2"-FLG'D	ROTOR VALVE		DISCHARGE
D	1½"-FLG'D	ROTOR VALVE		PURGE
E	1"-SPECIAL	RELIEF VALVE		SAFETY
F	⅛"-SCRW'D	FILTER		PRESSURE
G	4"-SPECIAL	AEROQUIP		WARM AIR
H	2"-FLG'D	BLIND		CLEAN OUT



ELEVATION



MANIFOLD STAND



CUSTOMER		HOFFMAN LA-ROCHE INC	
FACILITY		PROJECT 66	
CONTRACTOR		ARTHUR G. McKEE	
CONTRACT NO.		3072C	
McKEE PO NO.		168	
HLR PO NO.		E-LG4A90-B	
EQUIPT. NO.		CNV-194	CNV-196
		CCU-1771	CCU-1773
		SCL-791	SCL-794
		CNV-195	CNV-197
		CCU-1772	CCU-1774
		SCL-792	SCL-795
POSITION NO'S.		P3-6914	P3-6915
		P3-6988	P3-6989
DRAWING NO'S.		C914-4	C915-4
		C988-4	C989-4

NOTES

1. HEAD & SHELL MATL - SA-240-316L
2. FOUR (4) UNITS REQ'D. POSITION NO. SERIAL NO.

U.B. #	POSITION NO.	SERIAL NO.
650	P3-6914	J-162 A
651	P3-6915	J-162 B
652	P3-6988	J-162 C
653	P3-6989	J-162 D

3. CONTROLS ARE REMOTE MOUNTED
4. MK B & MK G SUPPLIED W/ END CAPS
5. FLEX CONNECTIONS ARE FOOD GRADE
6. RUPTURE DISC SUPPLIED W/ RELIEF VALVE
7. ALL BOLTING TO BE CAD. PLATED.
8. ALL INSTRUMENT CONNECTIONS ARE QUICK CONNECT
9. FOR TUBING CONNECTIONS SEE J-162-F-1-D.
10. FOR ELECTRICAL CONNECTIONS SEE J-162-E-1-D.
11. ORIENTATION IS TO BE DETERMINED IN FIELD BY CUSTOMER

CERTIFIED DRAWING

CERTIFIED PRINT
CONSOLIDATED ENGINEERING CO.
By Paul M. Tatum
Date Feb. 16, 1972

PRINT MADE
MAR 1 1972
ARTHUR G. McKEE & CO.

Item	Quan.	Description	Material
		Material List	

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CONSOLIDATED ENGINEERING CO.
Houston, Texas

#108363

FLUIDFLO AUTOMATIC PUMP
FAP-4-50-100-7 EW
ASSEMBLY

CNV-194

CUSTOMER	SHEET	DWN. BY	DATE	SCALE
P.O. NO.	OF 1	JDJ	7-16-71	1"=1'-0"
		JOB NO. J-162	DWG. NO. J-162-M-7-D	REV. 2