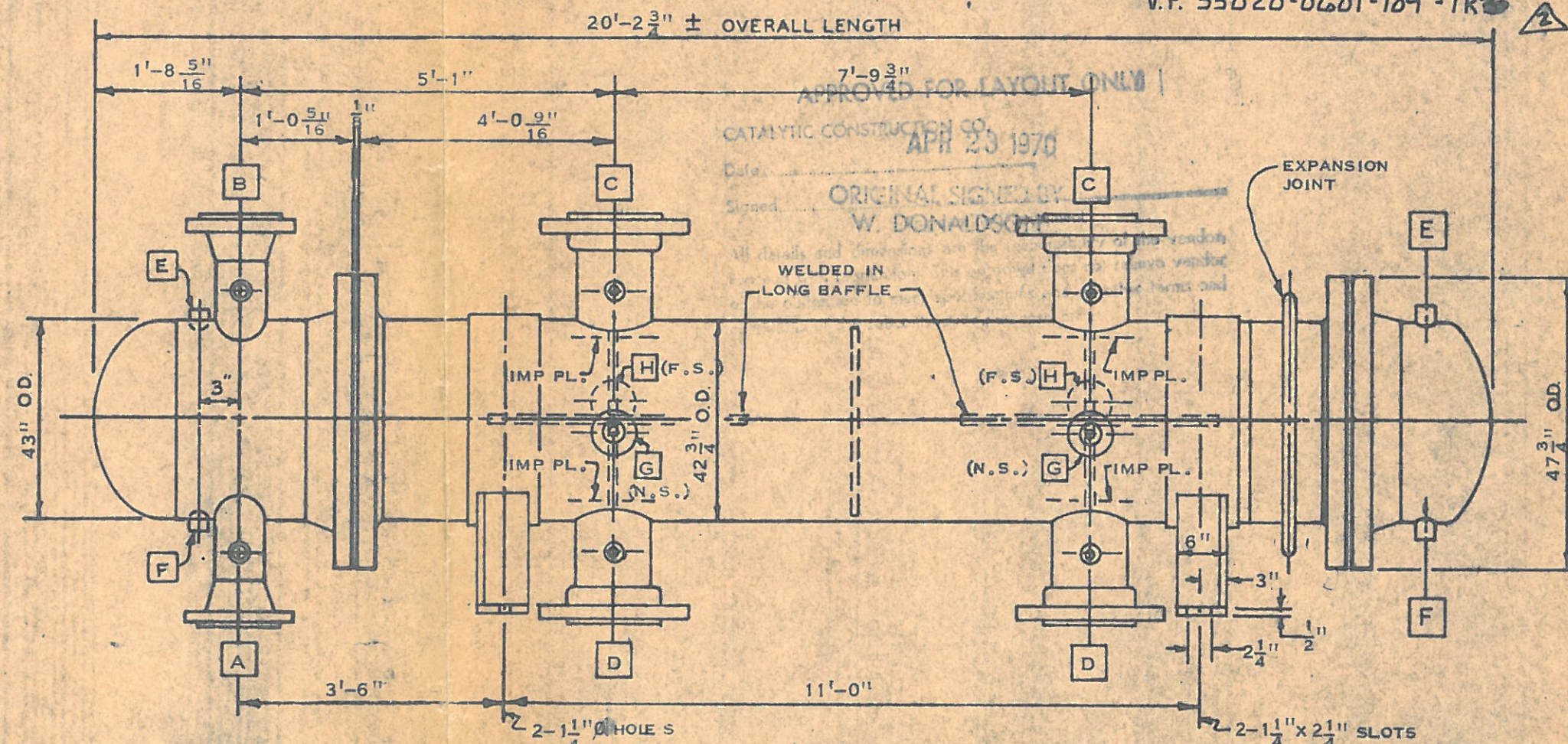
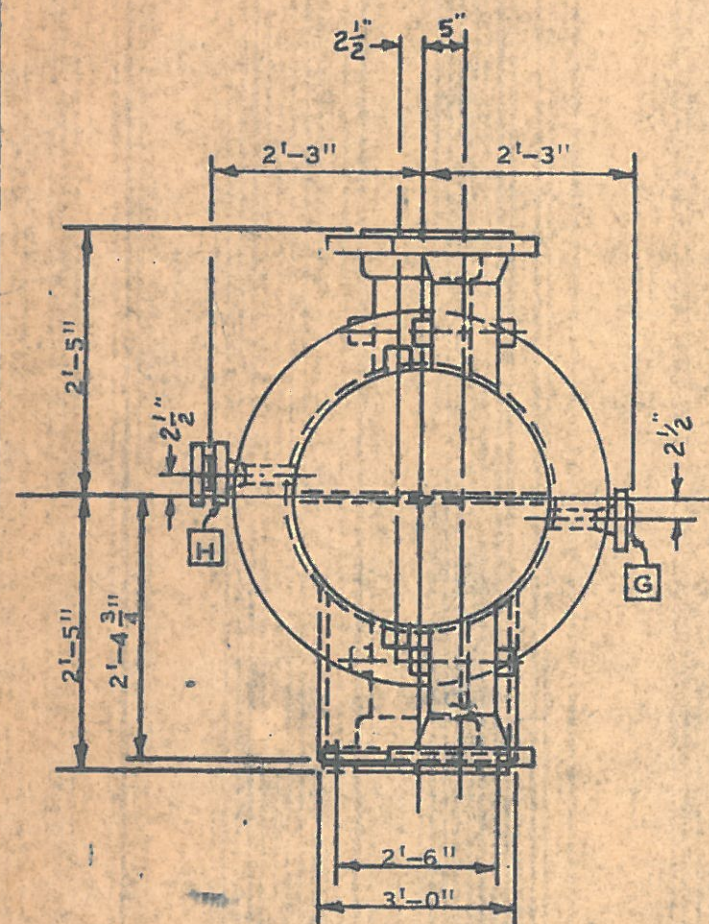


DESIGN DATA			NOZZLE DATA					GENERAL NOTES	CUST. CATALYTIC INC.	
	SHELL SIDE	TUBE SIDE	MARK	SIZE	RATING	FACING	SERVICE	1. DESIGN & CONSTRUCTION IN ACCORDANCE WITH: (A) SECTION VIII 1968 EDITION OF THE ASME BOILER & PRESSURE VESSEL CODE & SO STAMPED BY NATIONAL BOARD. (B) TEMA "R" (C) PENNSYLVANIA REGULATIONS. 2. ALL BOLT HOLES TO STRADDLE CENTERLINES 3. PAINT OUTSIDE ONE COAT OF PAINT PRIMER (ALL CARBON STL. SURFACES) 4. COMPLETE UNIT DESIGNED TO ROTATE 180°.	DEST: PITTSBURGH, PENNSYLVANIA	
DESIGN PRESSURE	FV & 25 PSI	100 PSI	A	8"	150 #	RF	INLET		CUST. P.O.: 33020-0601-109	
TEST PRESSURE	45 PSI	150 PSI	B	8"	150 #	RF	OUTLET		ITEM: HE-300	
			C	14"	150 #	RF	INLET		TAG: REACTOR CONDENSER	
DESIGN TEMPERATURE	450 °F	200 °F	D	14"	150 #	RF	OUTLET		SERIAL: 12548	
CORROSION ALLOWANCE	NONE	1/16"	E	3/4"	3000 #	CPLG.	VENT		FILE: 69-647	
NUMBER OF PASSES	DBL. SPLIT FLOW	4	F	3/4"	3000 #	CPLG.	DRAIN		CERTIFIED CORRECT FOR FABRICATION WESTERN SUPPLY COMPANY	
			G	3"	150 #	RF	VENT		BY <i>H. H. H.</i> DATE: 12-8-69	
1446-3/4" TUBES EA			H	3"	150 #	RF	VENT W/BLIND			
ESTIMATED WEIGHT EACH			EACH NOZZLE EQUIPPED WITH 2- 1" - 3000# CPLGS (PLUGGED)							
DRY	22,100 LBS.	WET	31,300 LBS.							

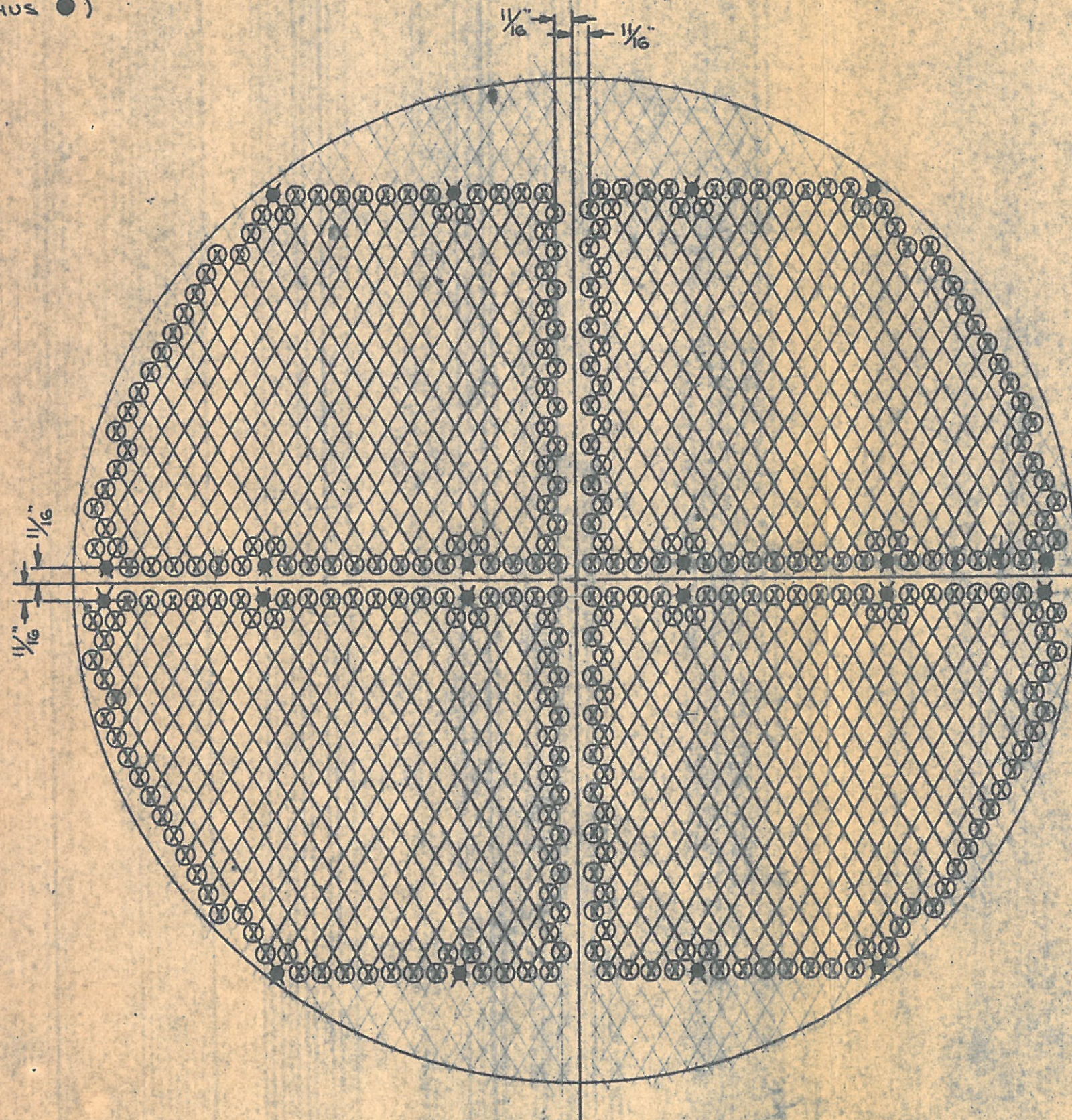


NOTE 1

WELD SUPPORT PADS TO SHELL, SHIP SUPPORTS LOOSE.

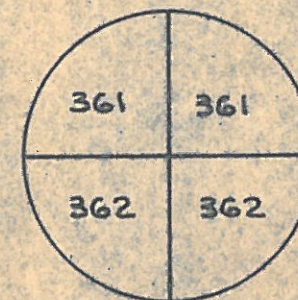
4	REV. COUPLINGS / W.S.CO.	4-9-70	DEL	JEP			WESTERN SUPPLY COMPANY TULSA, OKLAHOMA			
3	REV. PER CUST.	3-17-70	AL.	DM						
2	REV PER CUST	2-25-70	DM	M			OUTLINE DIMENSIONAL			
1	REV PER CUST	1-6-70	DM	M	12548	ONE EXCHANGER				
REV.	DESCRIPTION	DATE	BY	CHK	W.O.	REQ'D	DR. JIM	DATE 12-8-69	SIZE 42" X 16'-0"	DWG. NO. 12548 - AC
							CK. JDH	SCALE NONE	TYPE BHM	

LOCATION ONLY FOR
20 $\frac{1}{2}$ " ϕ TIE RODS.
(AS THUS $\bullet$)



VIEW LOOKING FROM TUBE SIDE

V.P.33020-0601-109-GRD



TUBES/PASS

APPROVED FOR LAYOUT ONLY
CATALYTIC CONSTRUCTION CO.

DESIGNED BY
SIGNED BY DONALDSON
Engineering Department

All details and dimensions are to be read in conjunction with the vendor's specifications. This approval does not relieve vendor of its obligation to meet specifications and all other terms and conditions of the contract or purchase order.

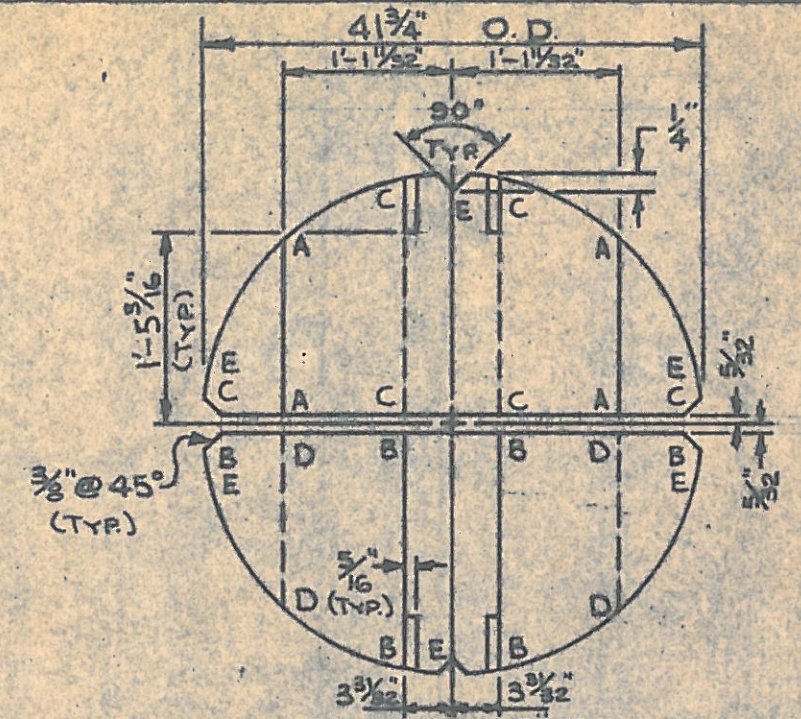
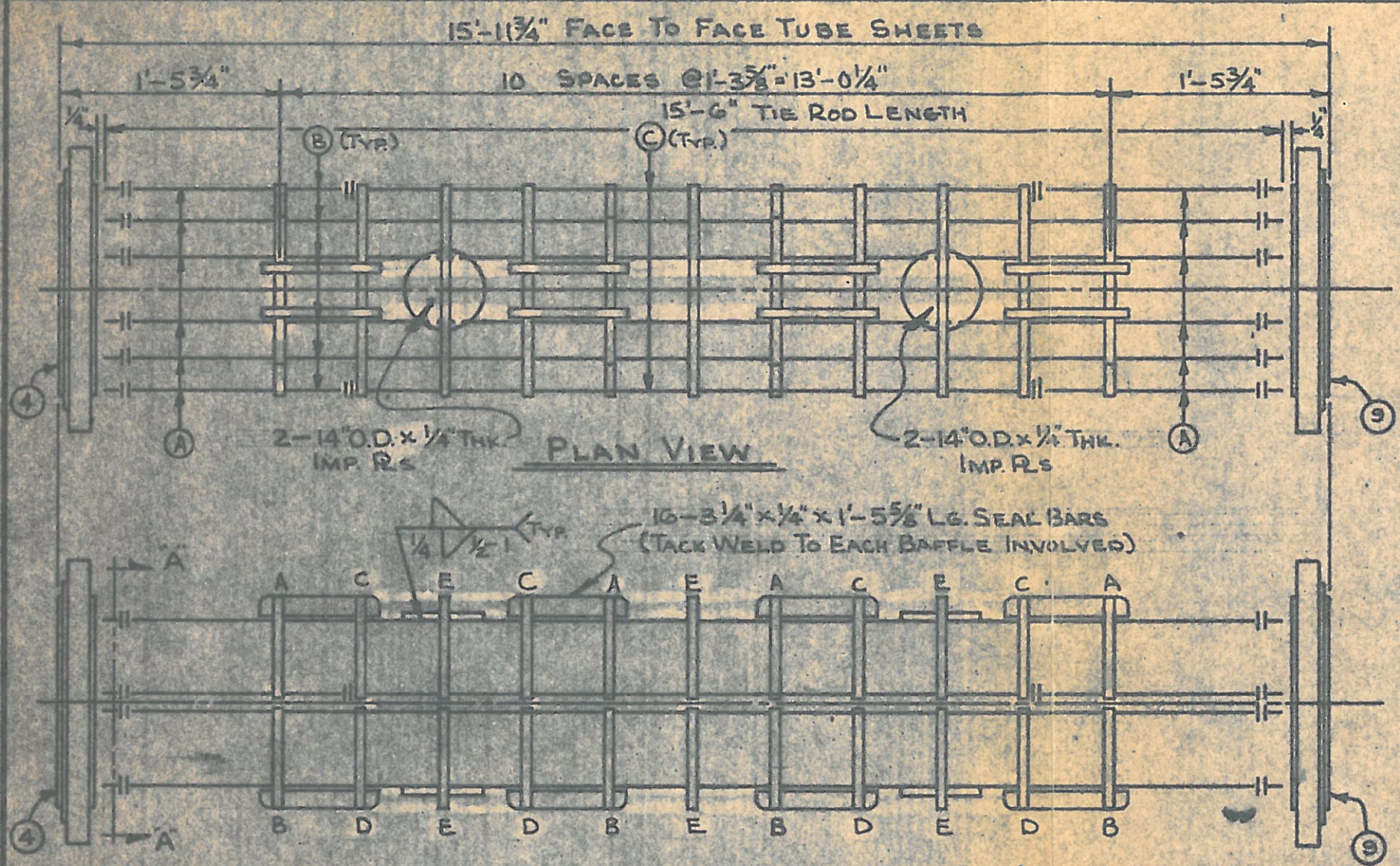
VP-33020 0601-109

NOTE:

DRILL & REAM TUBE HOLES TO $.758 \pm .002$ "
FOR 1446 - $\frac{3}{4}$ " O.D. TUBES ON $\frac{1}{16}$ " Δ PITCH
& $4\frac{3}{16}$ " TUBE CIRCLE. GROOVE TUBE HOLES
PER DETAIL "A" (DWG. 12548-EC)

WESTERN SUPPLY COMPANY
TULSA, OKLAHOMA

TUBE LAYOUT			
DR. DEL	DATE 3-23-70	SIZE 42"X16'-0"	DWG. NO.
GR. PETER	SCALE	TYPE BHM	12548-FC



- VIEW A-A BAFFLES**
- 4 - REQ'D. CUT-"AAA" & "BBB-BBB"
 - 4 - REQ'D. CUT-"CCC-CCC" & "DDDD"
 - 3 - REQ'D. CUT-"EEE" & "EEE" (NO SLOTS)
- 3/8" THK.

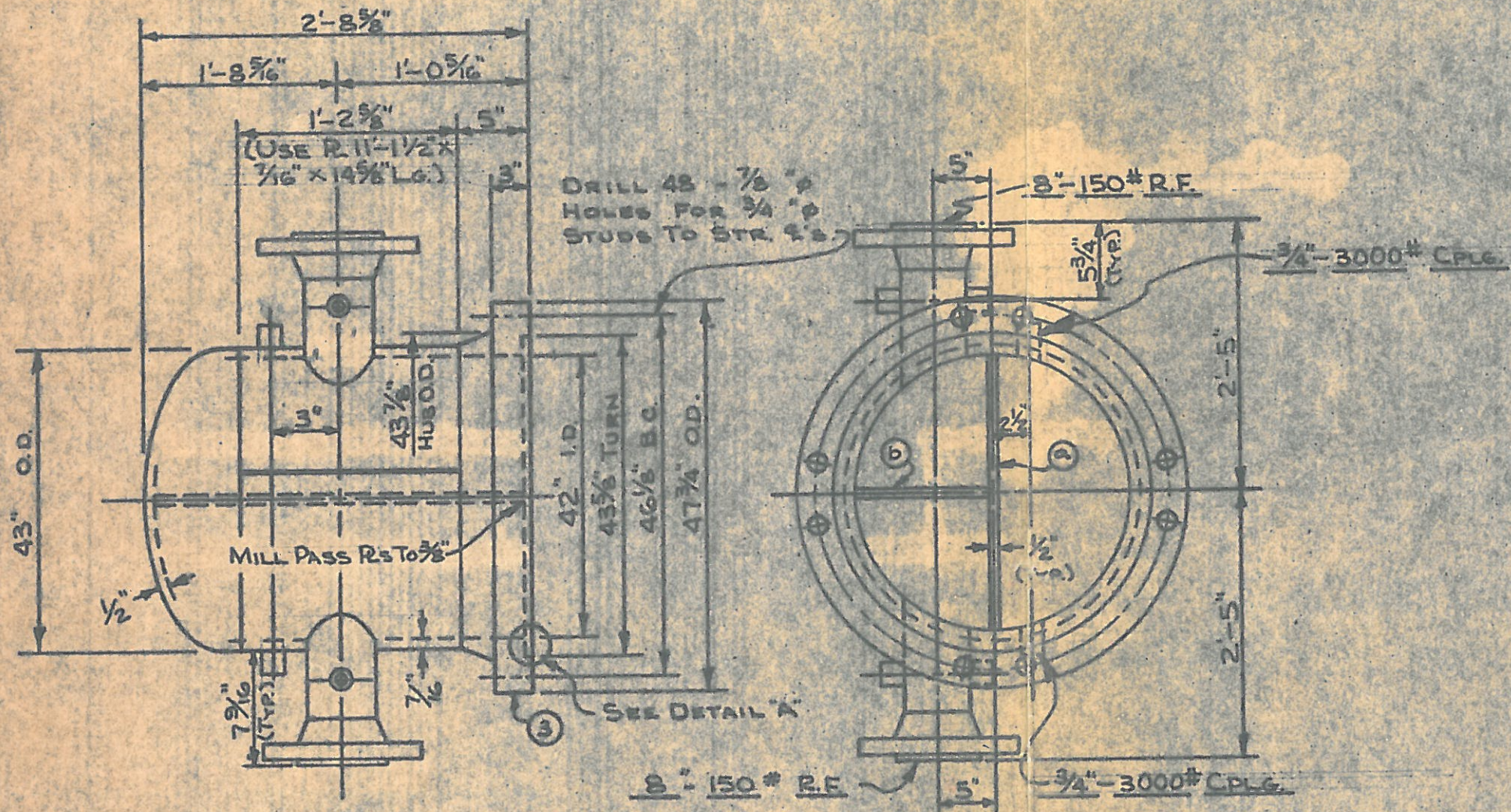
APPROVED FOR LAYOUT ONLY
CATALYTIC CONSTRUCTION CO.
Date _____
Signed _____
All details and dimensions are the responsibility of the vendor.
The user of this drawing is responsible for the accuracy of the data and for the proper interpretation of the drawing.

Mkt	Req'd	"X"	Mkt	Req'd	"X"	Req'd	"Y"
(A)	36	1'-0 5/16"				18	15'-6"
(B)	172	1'-3 1/4"				2	10'-9"
(C)	12	2'-6 3/8"					

- NOTES :**
1. DRILL 25/32" DIA. HOLES FOR TUBES.
 2. DRILL 9/16" DIA. HOLES FOR TIE RODS.
 3. DEBURR ALL TUBE HOLES.
 4. REMOVE ALL SHARP CORNERS ON BAFFLES.

VP-33020-0601-109 7R1

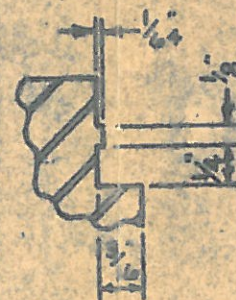
12548						ONE	REQ'D		WESTERN SUPPLY COMPANY TULSA, OKLAHOMA	
BUNDLE DETAILS						DR. DEL		DATE 4-1-70	SIZE 42" x 16'-0"	DWG. NO. 12548-GC
REV.						DESCRIPTION	DATE	BY	CH.	W.O.
CK. JEFFER						SCALE	TYPE BHM'			



CHANNEL DETAILS

NOTES. 4

1. HEAT TREAT CHANNEL.
2. SPOT X-RAY CHANNEL.
3. SEE DWG. STD.-1 FOR WELD DETAILS.
4. NOZZLES EQUIPPED 42-1"-3000# CPLGS.



DETAIL "A"

APPROVED FOR LAYOUT ONLY
CATALYTIC CONSTRUCTION CO. APR 23 1970

Date _____
 Search _____
 INDEXED _____
 SERIALIZED _____
 FILED _____
 MAR 1964
 FBI - MEMPHIS
 ORIGINAL FILED
 BY: DONALDSON

VP-33020 0601-109 2R1

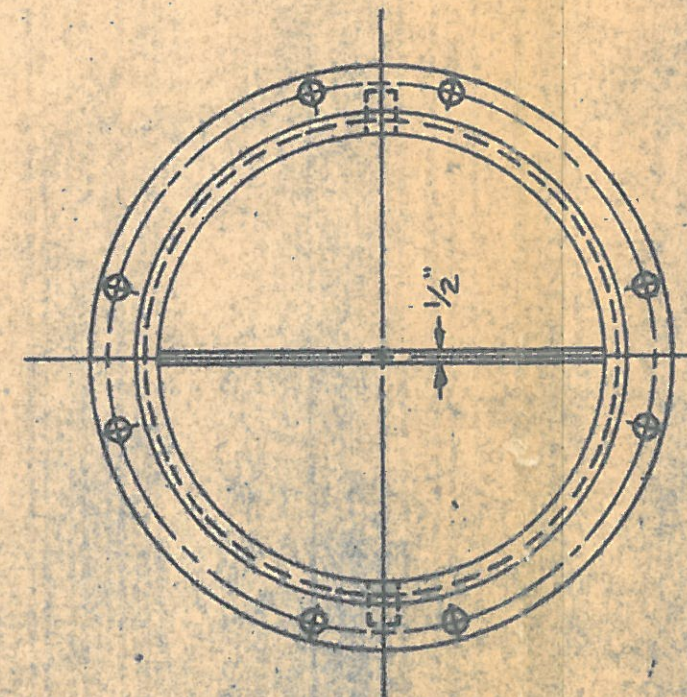
V.P. 33020-0601-109-2 R0

WESTERN SUPPLY COMPANY
TULSA, OKLAHOMA

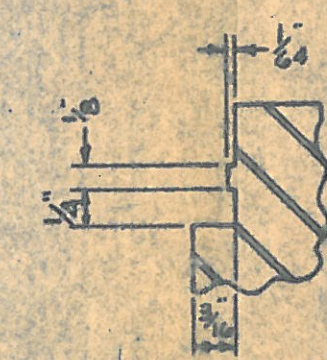
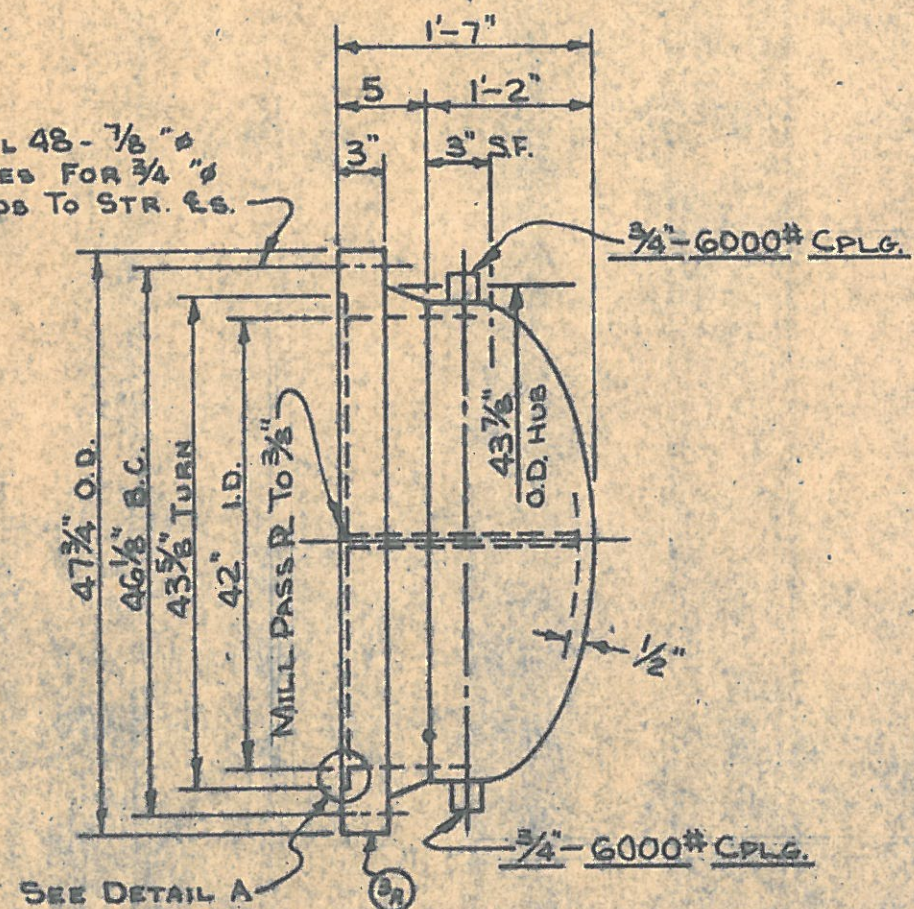
CHANNEL DETAILS

DR. DEL	DATE 4-1-70	SIZE 42" x 16'-0"	DWG. NO. 12548-BC
CK. PEPPER	SCALE NONE	TYPE BHM	

					12548	ONE
REV.	DESCRIPTION	DATE	BY	CK.	W.O.	REQ'D



DRILL 48 - 7/8" Ø
HOLES FOR 3/4" Ø
STUDS TO STR. ES.



DETAIL 'A'

- NOTES :**
1. HEAT TREAT CHANNEL.
 2. SPOT X-RAY CHANNEL.
 3. SEE DWG. STD.-1 FOR WELD DETAILS.

APPROVED FOR LAYOUT ONLY
CATALYTIC CONSTRUCTION CO.
APR 23 1970
ORIGINAL SIGNED BY
W. DONALDSON
All work is subject to the responsibility of the vendor.
The purchaser is not responsible for the accuracy of the
information furnished by the vendor and for any errors and
omissions of the subcontract or purchase order.

VP-33020-0601-109 4R1

V.P. 33020-0601-109-4R0

WESTERN SUPPLY COMPANY			
TULSA, OKLAHOMA			
BACK CHANNEL DETAILS			
DR. DEL	DATE 4-2-70	SIZE 42" x 16'-0"	DWG. NO 12548-DC
CK. PETER	SCALE	TYPE BHM	

REV.	DESCRIPTION	DATE	BY	CK.	W.O.	REQ'D

WESTERN SUPPLY CO. TULSA OKLAHOMA

REACTOR CONDENSER



DIV. I
W

NAT'L. BOARD NO. 3698

SHELL D.P. FV 25 P.S.I. 450 °F. TEST 45 P.S.I.

TUBES D.P. 100 P.S.I. 200 °F. TEST 150 P.S.I.

R.T. (SPOT) CHANNELS & SHELL

H.T. CHANNELS

P.O. 33020-0601-109 DATE SERIAL 12548

ITEM HE-300 SURFACE 4444

SIZE 42" x 16'-0" L.G. TYPE BHM

TUBES 1446- 3/4" O.D. x 16 BWG (AVG.) x 16'-0" L.G. SA-249-316L

SHELL THK. 3/8; CHAN. THK. 7/16; RAD. CHAN. HD. 38"

APPROVED FOR LAYOUT ONLY

CATALYTIC CONSTRUCTION CO.

Date APR 27 1970

ORIGINAL SIGNED BY W. DONALDSON

Engineering Department
All drawings and dimensions are the responsibility of the reader.
Prices are approximate. This drawing does not relieve vendor
of the obligation to meet specifications and all other terms and
conditions of the contract or purchase order.

VP-33020-0601-109

V.P. 33020-0601-109-9R0

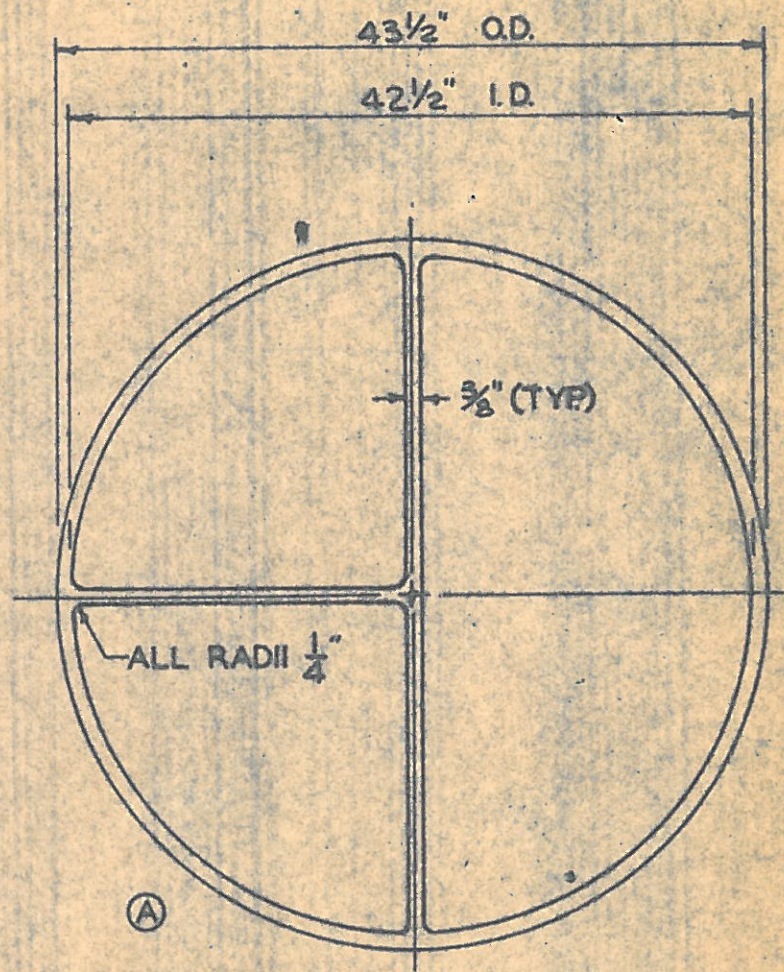
WESTERN SUPPLY COMPANY
TULSA, OKLAHOMA

NAME PLATE

DR. DEL	DATE 4-3-70	SIZE 42" x 16'-0"	DWG. NO. 12548-JC
CK PEPPER	SCALE	TYPE BHM	

REV.	DESCRIPTION	DATE	BY	CK	W O	REQ'D

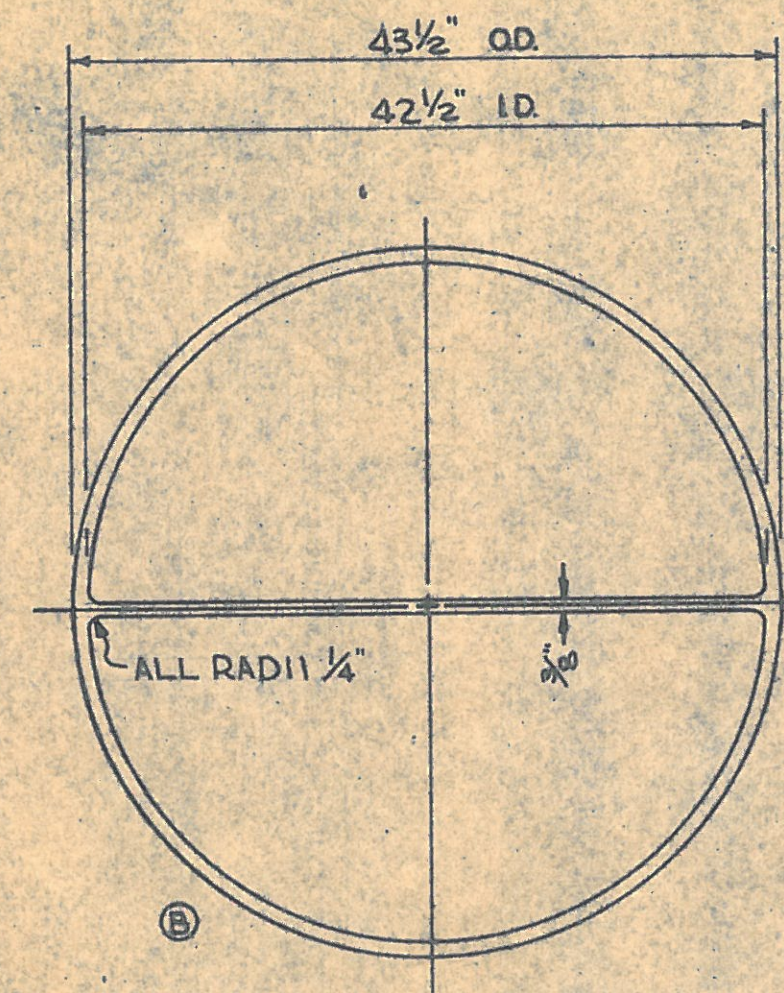
HE-300



FRONT CHANNEL GASKET

ONE REQ'D

1/8" THK. TYPE 316 STN. STL. JACKETED
ASBESTOS FILLED



BACK CHANNEL GASKET

ONE REQ'D

1/8" THK. TYPE 316 STN. STL. JACKETED
ASBESTOS FILLED

APPROVED FOR LAYOUT ONLY
CATALYTIC CONSTRUCTION CO.

Date: **APR 23 1970**

ORIGINAL SIGNED BY
[Signature]

All details and dimensions are the responsibility of the vendor.
Processed with fabrication, and type of material of release, vendor
of the obligation to meet specifications and all other requirements
and terms of the contract or purchase order.

VP-33020-0601-109

801

REQ'D. AS NOTED
FOR ONE SET.

V.P. 33020-0601-109-8RO

							WESTERN SUPPLY COMPANY					
							TULSA, OKLAHOMA					
							GASKET DETAILS					
						12548	ONE	SET	DR. DEL	DATE 4-3-70	SIZE 42" x 16'-0"	DWG. NO.
REV.	DESCRIPTION	DATE	BY	CK.	W.O.		REQ'D		CK. PETER	SCALE NONE	TYPE BHM	12548-HC