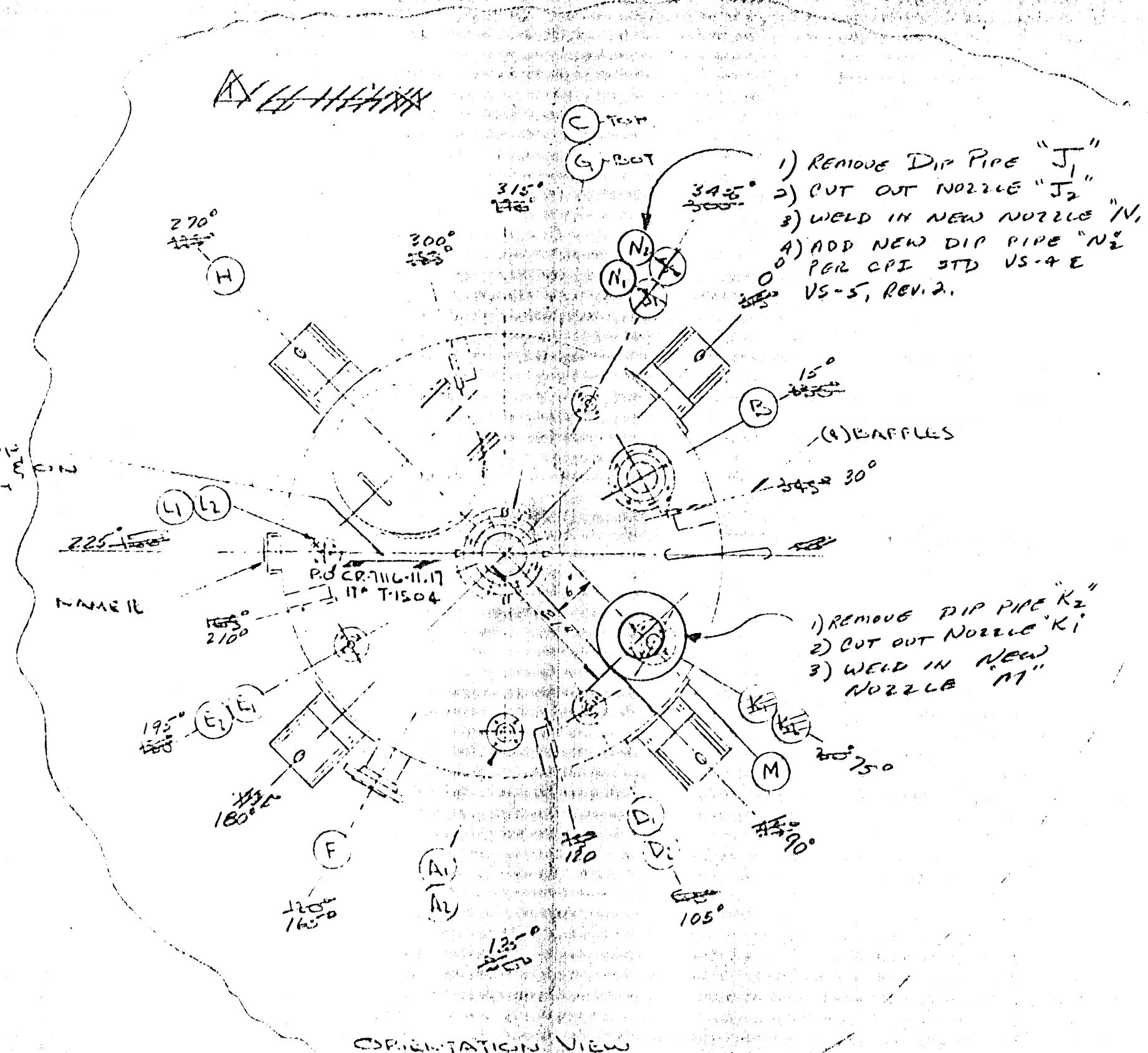
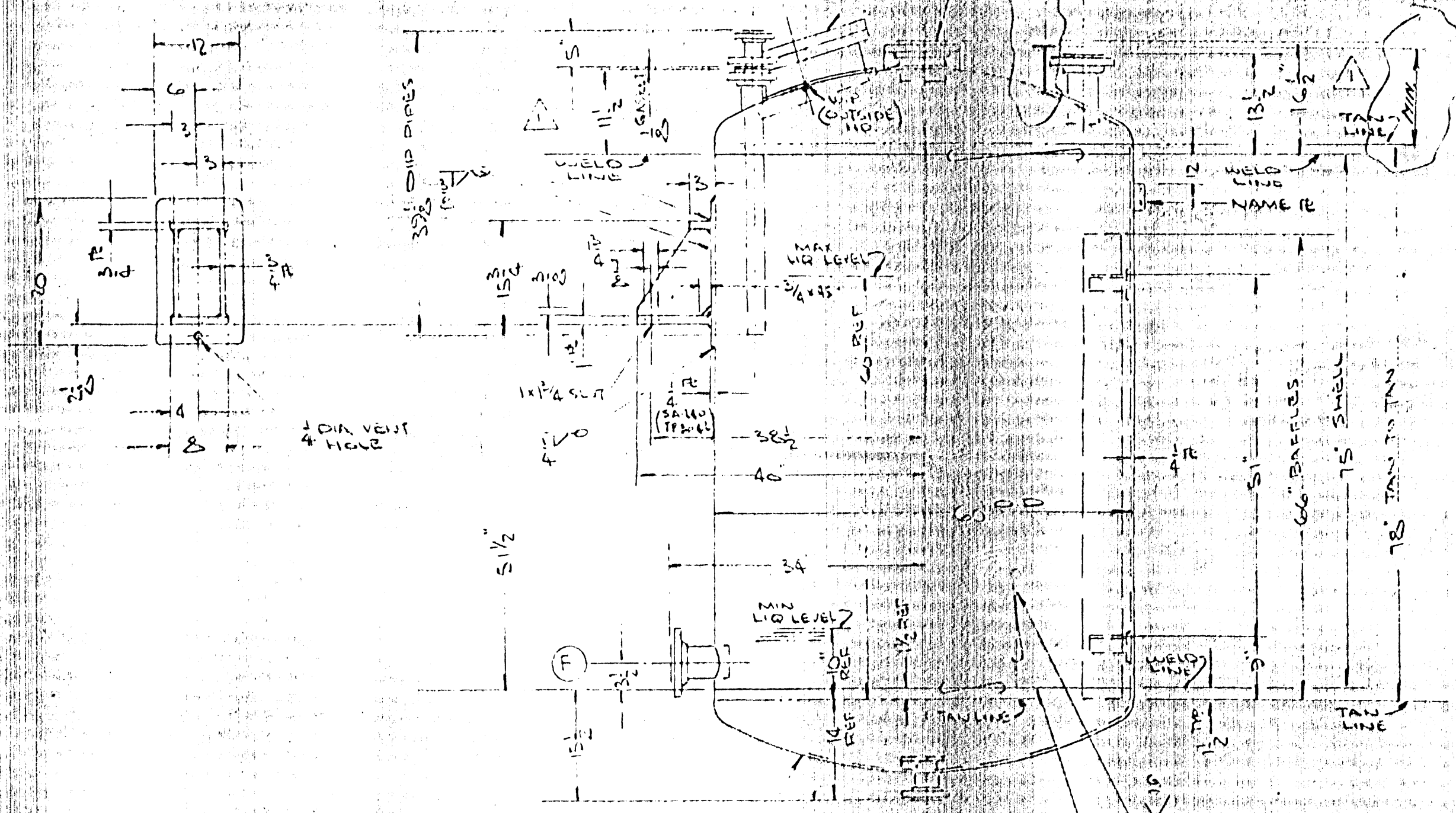


PAINT NORTH: ARROWS END TOP
PAINT ITEM: R.D. END TOP & IN
(S) SIDE. ALL LETTERS & HIGH



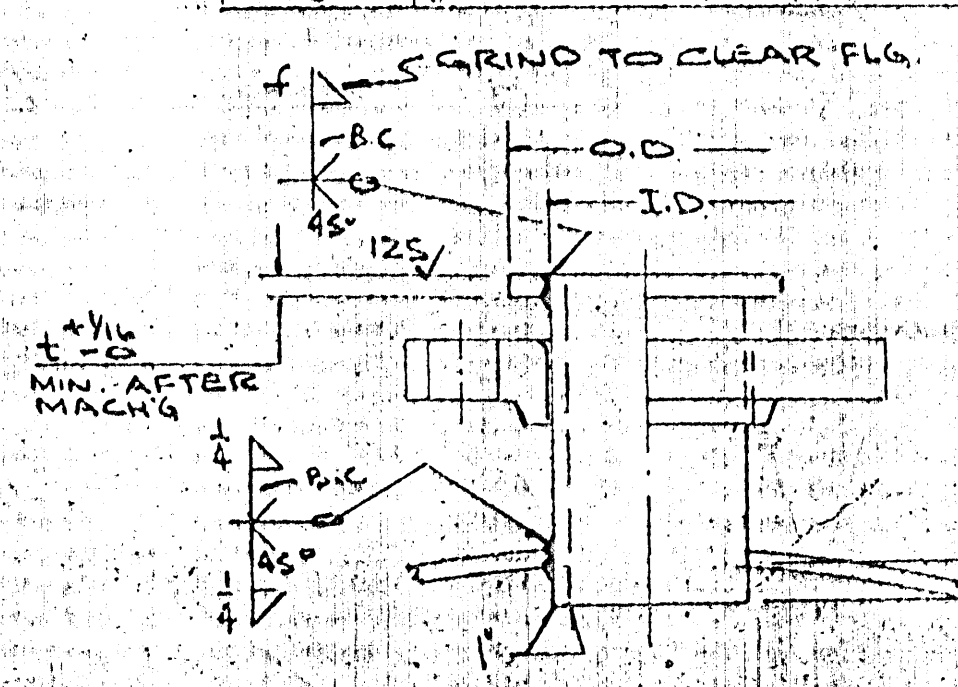
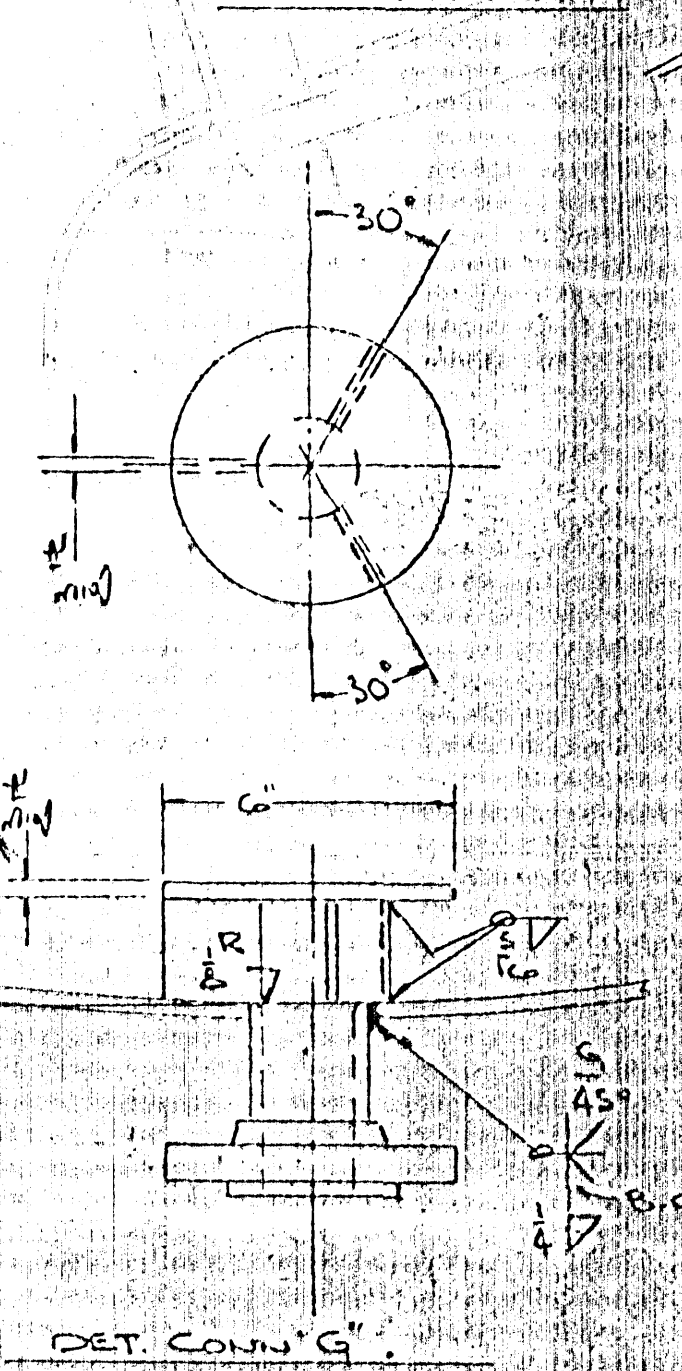
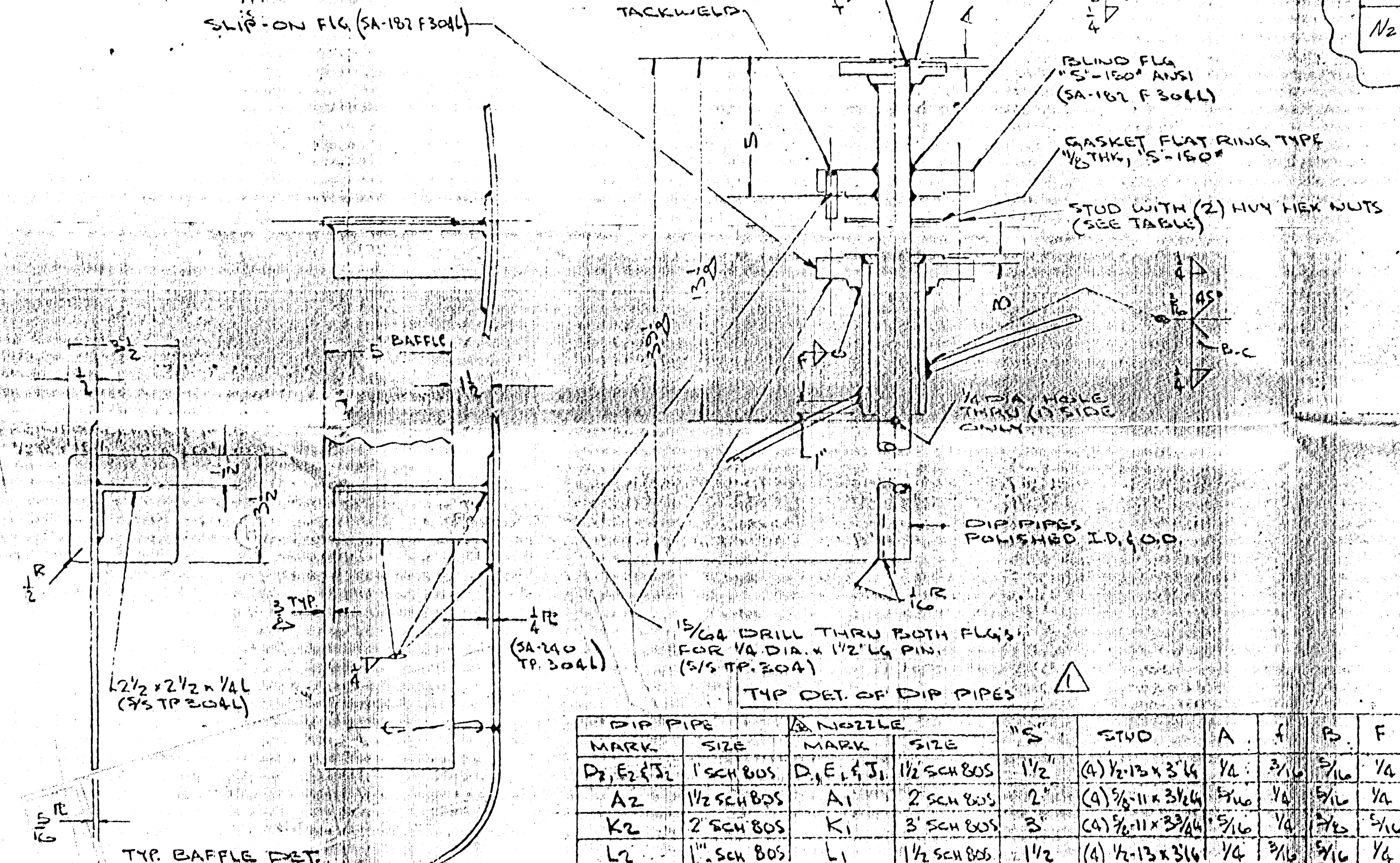
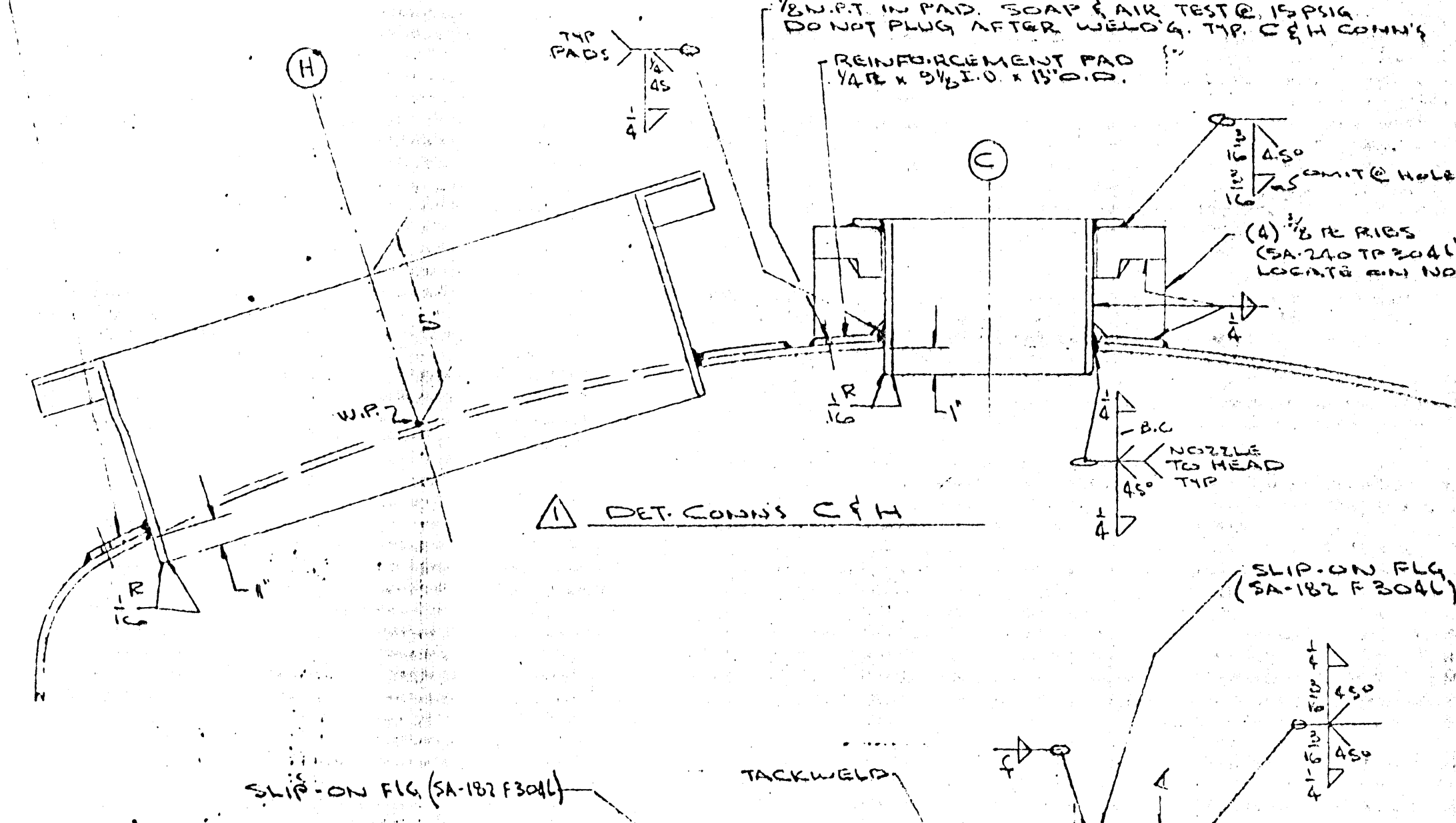
SPILLATION VIEW



ASME FLG'D & DISHED MD
GO C.D. 1/4" NOM THK. GO RAD. OF DISH.
2 1/2" I.C.R. 1 1/2" DIA. (1/2" S.F. REF.)
(2) REQ'D

NOTE: BOTTOM OF VESSEL
WILL HAVE PANEL COIL
THERMOCOIL (SUPPLIED BY OTHERS)
VEHICLE WILL HAVE TO WELD
MOUNTING STRIPS TO VESSEL
BOTTOM HORN TO MOUNT
PANEL COIL

REINFORCEMENT PAD
1/2" R x 12 1/2" I.D. x 7 1/2" O.D.



MARK	SIZE	R. RING	I.D.	O.D.	E	F
F & G	3" SCH 80S	3 1/2"	3 1/2"	5	1 1/2"	1/4"
B	4" SCH 80S	5 1/2"	4 1/2"	6 1/2"	1 1/2"	1/4"
C	2" SCH 80S	3 1/2"	3 1/2"	5	1 1/2"	1/4"

DIP PIPE	NOZZLE	SIZE	STUD	A	I	B	F
D, E, F, G	1" SCH 80S	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
A, Z	1 1/2" SCH 80S	2"	2"	2"	2"	2"	2"
K, L	2" SCH 80S	3"	3"	3"	3"	3"	3"
L, 2	1" SCH 80S	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

NOZZLE SCHEDULE		
MARK	SIZE & RATING	SERVICE
A, 1	2" SCH 80S	7" CH INLET
A, 2	1 1/2" SCH 80S	7" CH INLET
B	4" SCH 80S	VENT
C	2" SCH 80S	AGITATOR
D, 1	1" SCH 80S	PW INLET
D, 2	1 1/2" SCH 80S	PW INLET
E, 1	1" SCH 80S	FILTRATE INLET
E, 2	1 1/2" SCH 80S	FILTRATE INLET
F	3" SCH 80S	SLIP-ON FLG
G	3" SCH 80S	SLIP-ON FLG
H	1 1/2" SCH 80S	SLIP-ON FLG
I	1 1/2" SCH 80S	SLIP-ON FLG
J	1 1/2" SCH 80S	SLIP-ON FLG
K	2" SCH 80S	SLIP-ON FLG
L	1" SCH 80S	SLIP-ON FLG
M	6"	SLIP-ON FLG
N, 1	3"	SLIP-ON FLG
N, 2	2"	SLIP-ON FLG

DESIGN CONDITIONS		
CODE: ASME	SECT. VIII	DIV. 1
DATA	SHELL	NON LETHAL
CONTENTS	SERVICE	NON LETHAL
DESIGN PRESS. (INT.)	70 PSIG	PSIG
DESIGN TEMP. (INT.)	150 °F	°F
DESIGN PRESS. (EXT.)	PSIG	PSIG
DESIGN TEMP. (EXT.)	°F	°F
HYDRO TEST	40 PSIG	PSIG
CORROSION ALLOW.	1/16"	
RADIOGRAPH	(1) SPOT	
JOINT EFF. SHELL	85%	
JOINT EFF. HEAD	100%	
HEAT TREATMENT	NONE	

MATERIALS		
SHELL	SA-240 TP 304L	
HEAD	SA-240 TP 304L	
PIPE	SA-240 TP 304L	
FLANGE	SA-240 TP 304L	
BLIND	SA-240 TP 304L	
STUDS/OUTLET		
FITTINGS (WELDED)		
REINFORCING PAD	SA-240 TP 304L	
STIFFENER		
PLATE	SA-240 TP 304L	
SUPPORT		
INTERNAL BOLTING		
EXTERNAL BOLTING	SA-193 B7	
EXTERNAL NUT	SA-193 B7	
COUPLING		
GASKET	TEFLON IMPREGNATED COMP. ASB.	
TUBES		
TUBE SHEET		
BAFFLES	SA-240 TP 304L	
SPACERS		
PASS PARTITION		
MANWAY FLG		
MANWAY NOZZLE	SA-240 TP 304L	

STANDARDS		
TOLERANCES:	PIERSOL PINE STD	
FINISH	SMOOTH & POLISHED	
WELDS AS FABRICATED	INTERNAL	EXTERNAL
WELDS GRIND SMOOTH AND NOT		
NECESSARILY FLUSH		
POLISH (PER NOTE 1)		
PAINT: NO PAINT REQUIRED ON STEEL SURFACES PER NOTE		
INCLUDING LOSS FLANGES BEFORE ASSEMBLY		
GENERAL		
1. ALL BOLT HOLES TO STRADDLE VESSEL CENTER LINE.		
2. UNLESS OTHERWISE NOTED.		
3. GASKET SURFACES TO BE PROTECTED WITH MASONITE		
OR EQUAL COVERS.		
4. THOROUGHLY CLEAN ALL SURFACES.		
5. TRUE ORIENTATIONS SHOWN ONLY IN ORIENTATION VIEW.		
INSPECTION		
CUST: PER NOTE	INSUR. CO. B7	
WEIGHTS		
EMPTY	250 LBS	
FULL OF WATER	11,640 LBS	
NET WT	LBS	
GROSS WT	LBS	
T.E.M.A.		
CLASS:		
TYPE:		
PASSES		
SHELL SIDE:		
TUBE SIDE:		
TOTAL SURFACE AREA:	80 FT.	

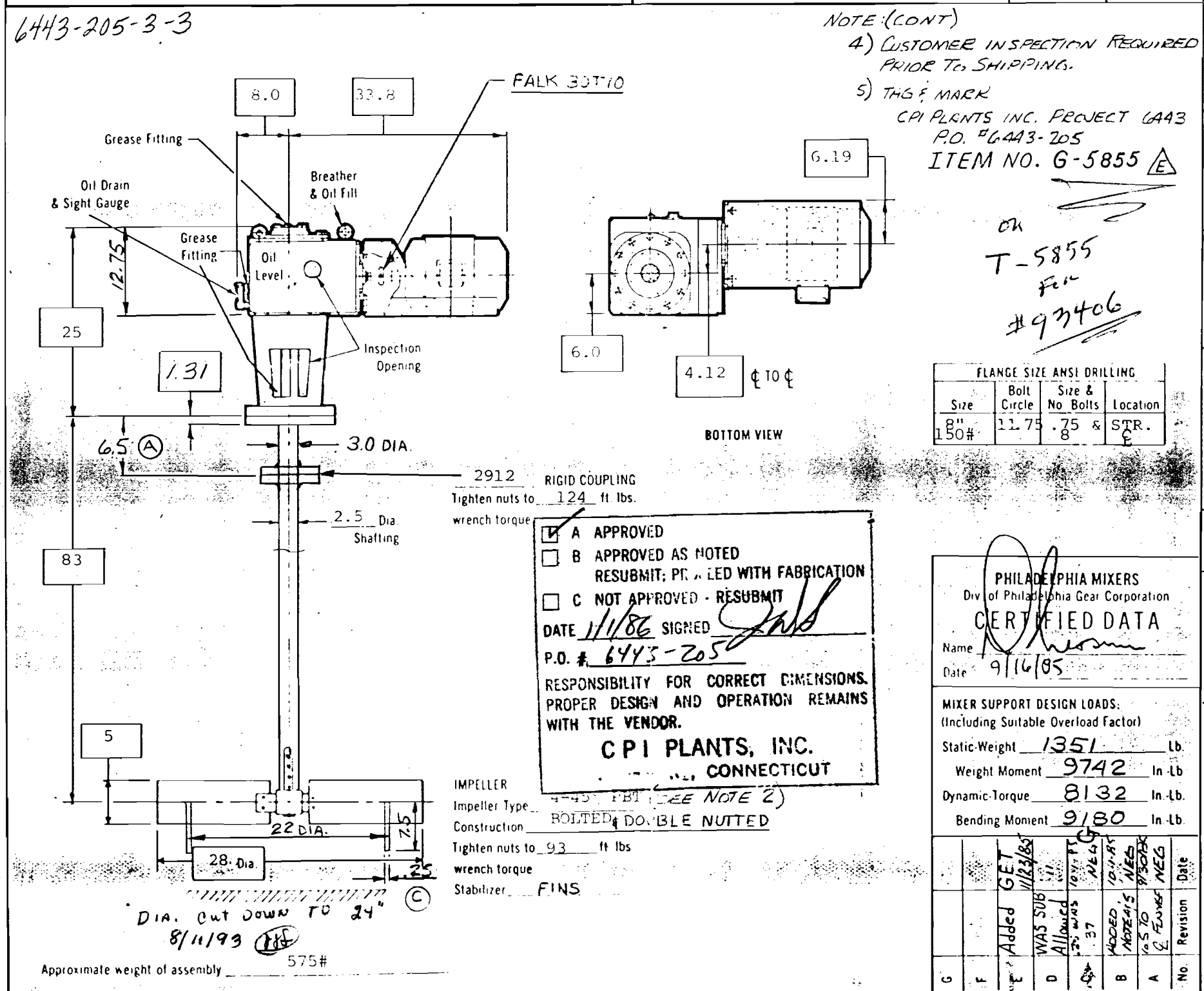
6443 FMC
C.P.D. # T-5855
(FORMERLY T-1504)

CERTIFIED CORRECT
PIERSOL PINE MFG. CO. INC.
MADE IN U.S.A.

STANDARD NAME PLATE		
PIERSOL PINE MFG. CO. INC.	ENGINEERS & ALLOY FABRICATORS	OAKS, PENNA.
M.A.W.P.	P.S.I.G.	AT
MFR. SER. NO.	BUILT 19	
CUST. NO.		

REF. C.P.D. DWG. 7116-T-1504, REV. 3	
3 1/16" TEST PRESS. MAR. 30	MCF
2 1/16" TEST PRESS. MAR. 30	(LWS)
1 1/16" TEST PRESS. MAR. 30	RMD
NO. DATE	
PIERSOL PINE MFG. CO. INC.	
Engineers & Alloy Fabricators	
OAKS, PENNSYLVANIA 19456	
PHONE: 812-247-1800 489-2985 688-0500	
FOR C.P.D. ORD. & REVISIONS	
T-5855	
ITEM NO. T-1504	
DATE: 3-7-71	DWG. NO.
SCALE: 3/4" = 1'-0"	7931-D
DRAWN: RMD	REV. 3
APPROVED: [Signature]	SHEET 1 OF 1

J SS	PHILADELPHIA MIXERS	Order No.: 845849-P-1	Drn.	Date
	OUTLINE INSTALLATION DRAWING	Serial No.: 85DCF1209	MAR	9/3/85
	DRAWING NO. PM -85DCF1209-D1	No. required on this order 1	Chkd. G	Date 9-3-85



3800 DRIVE

Size 3803 S Model PTS

Gear Ratio 11.4:1

Service Factor 1.5

Output Speed 155 RPM

MOTOR: Make RELIANCE, WEST., U.S., G.E.
HP 10 RPM 1800
Services Ph 60 Hz 230/460 V
Enclosure TEFC Frame 215 T
Supplied By P.M. Special CHEM. DUTY/1.15SF

STUFFING BOX: Ref. Dwg. No. PI-SB, 1.02 & 1.10
Design Pressure 30 PSIG Design Temp 300° F
Packing Material PH 6 GRAPHITE-ASBESTOS
Packing Gland CARBON ST. W/304S/S STUDS & NUTS
Lantern Ring N/R
Operation ATMOS. Pressure 104° F Temp.

- NOTES
- 1) IMPELLER HUB NEEDS TO BE DYE PENETRANT INSPECTED.
 - 2) IMPELLER ADJUSTABLE: 18" VERTICALLY, IN 3" INCREMENTS.
 - 3) HIGH SPEED COUPLING TO BE FALK T-10 TYPE

GENERAL: Shaft rotating clockwise looking down.
MATERIAL: All wetted parts in tank are 304-L-S/S
unless otherwise specified No Substitution Allowed

TANK INFORMATION:

Size 60" DIA. Tan. To Tan. 78"

Nozzles 5" PROJECT. Top --- Bottom ---

Baffles 5" Width 78" Length ---

Qty 4 At 90° Apart

Heads ASME Top ASME Bottom

CUSTOMER INFORMATION:

Name CPI PLANTS, INC.

Address 680 BRIDGEPORT AVENUE
City SHELTON, State CT Zip 06404

Ship To SAME
C/O FMC CORP., AGRICULTURAL CHEM. GROUP

Address 1701 E. PATAPSCO AVE
City BALTIMORE, State MD. Zip 21226

Customer P.O. No 6443-205

Item Tag No SEE NOTE 5

Requested Routing CHEAPEST - LFA

Shipping Date 1/31/86

93406

 PLANTS INC.	TYPE: MECHANICAL	SPECIFICATION NO.: 6443-205		
	TITLE: Agitator	PROJECT NO.: 6443		
		Rev. 1	Date 8/15/85	Page 18 of
CLIENT: FMC Corporation		LOCATION: Baltimore, Maryland		

Item No.: G-5855

Quantity: One(1)

Service: Soda Ash Mix Tank Agitator

#93406

PROCESS DATA

Tank Item No.: T-5855 (see Piersol dwg. no. 7931-D, Rev. 3)

Tank Capacity: 1090 gal.

Type of Tank: Vertical, ASME F&D heads

Tank Size: 5'-0" O.D. x 6'-6" T.T.

Baffles Description: Four(4) baffles equally spaced, 5'-6" long x 5" wide x 5/16" thick with 1 1/2" wall clearance

Operating Level in Tank: Variable - Minimum at totally empty to 6" below top tangent line

Material to be Mixed: Water @ 104°F and solid soda ash to form 20 wt % aqueous solution

Specific Gravity @ Operating Temperature: 1.22

Viscosity @ Operating Temperature: 2.26 cp

Type of Solids: Granular soda ash (Na_2CO_3) from large storage hopper

Solids Concentration: 20 wt %

Operating Temperature: 104°F (20°C)

Design Temperature: 250°F

Operating Pressure: Atm.

Design Pressure: 20 psig

Mixing Requirements:

1. Maintain water temperature @ 40°C prior to solids addition through use of panel coils on tank.
2. To dissolve solids to form 20 wt % solution in water.
3. To maintain uniform solution composition.
4. To maintain solution temperature @ 40°C using above noted panel coils.

9,3406

 PLANTS INC	TYPE: MECHANICAL	SPECIFICATION NO.: 6443-205		
	TITLE: Agitator	PROJECT NO.: 6443		
	Rev. 1	Date 8/15/85	Page 19	of
CLIENT: FMC Corporation		LOCATION: Baltimore, Maryland		

Item No.: G-5855

MECHANICAL DATA

- △ Manufacturer: * Philadelphia Mixer
- △ Type: * 3803-S-PTS
- Top Entering: Yes
- Side Entering:
- Mounting: Nozzle ☒
Beam ☐
Clamp ☐
- △ Nozzle Size & Rating: 10" - 150# ANSI F.F. (with 8"-150# ANSI studs.)
- △ Coupling Type: Flexible ☒ FALK T-10
Rigid ☒
- Impeller Type: Turbine ☒ 45° pitched blade
Anchor ☐
Propeller ☐
- Material of Impeller: 304L SS
- No. of Impeller(s): One(1) - located 12" above bottom tangent line
- △ Size of Impeller(s): 28" dia.
- Blade on each Impeller: Four(4); 5" wide
- Type of Blades: Fixed ☐ Upthrust ☐
Flat ☐ Down Thrust ☒
Removable ☒ Radial ☐
- △ Stabilizer Required: * Yes ☒ No ☐
- △ Shaft Diameter: * 3/2½" (gear box, seal/mixer)
- △ Shaft Length: * 83.44" (from support surface to bottom impeller)

93400

 PLANTS INC	TYPE: MECHANICAL	SPECIFICATION NO.: 6443-205		
	TITLE: Agitator	PROJECT NO.: 6443		
		Rev. <u>I</u>	Date <u>8/15/85</u>	Page <u>20</u> of <u> </u>
CLIENT: <u>FMC Corporation</u> LOCATION: <u>Baltimore, Maryland</u>				

Item No.: G-5855

MECHANICAL DATA (cont.)

Material of Shaft: 304L SS

△ Critical Shaft Speed: * 281

Impeller RPM: 155

△ Impeller BHP: 8.5

△ Motor HP: * 10

△ Motor RPM: * 1750

△ Gear Reducer -

Manufacturer: * Philadelphia Mixer

Type: * Helical/Spiral

Ratio: * 11.29

AGMA Class II

☐ Inline or ☒ Right Angle

△ HP Rating @

Design Speed: * 15.2

☐ Forced or ☒ Splashed Lubrication

△ Packing Required: Yes ☒ No ☐

△ Type of Packing: Five(5) rings of graphite asbestos

△ Mechanical Seal Req'd: Yes ☐ No ☒

△ Type:

Manufacturer:

Design Pressure:

NOTE

1. Agitator and shaft shall be removed through an 18" dia. manhole.

9-1406

 PLANTS INC.	TYPE: MECHANICAL	SPECIFICATION NO.: 6443-205	
	TITLE: Agitator	PROJECT NO.: 6443	
	Rev. 1	Date 8/15/85	Page 21 of ____
CLIENT: <u>FMC Corporation</u> LOCATION: <u>Baltimore, Maryland</u>			

Item No.: G-5855

MECHANICAL DATA (cont.)

- Bearings: * Radial ☒ Thrust ☒ Steady ☐
- Bearing Span: * 8.16"
- Bending Moment @
 Support Point: * 890 ft. lbs.
- Torsional Force: * 846 ft. lbs.
- Weights -
 - Drive & Motor: *)
 - Shaft & Impeller: *) 1000 lbs.

93406

 PLANTS INC	TYPE: MECHANICAL	SPECIFICATION NO.: 6443-205		
	TITLE: Agitator	PROJECT NO.: 6443		
	Rev. 1	Date 8/15/85	Page 22 of ____	
CLIENT: FMC Corporation		LOCATION: Baltimore, Maryland		

1

Item #	G-5321 A/B	G-5325	G-5601	G-5711	G-5855		
Descrip.							
Quantity	Two(2)	One(1)	One(1)	One(1)	One(1)		
Horse-power*	20	10	30	7.5	10		
Full Load RPM *	1750	1750	1750	1750	1750		
Frame Size *	256T	215T	286T	213T	215T		
Power Factor *							
Full Load Amps *							
Locked Rotor Amps*							

1 Manufacturer: * Reliance, G.E, Westinghouse, U.S. Motors
 Type: Squirrel Cage Induction
 Volts: 460 Phase: 3 Hertz: 60
 Class Insulation: F NEMA Design: B
 Temperature: 40°C Ambient
 Altitude: 12 ft. above sea level Duty: Continuous
 Enclosure: TEFC; Class I, Group D, Div. II
 Bearings: Ball Lubrication: Grease
 Type Drive: Direct
 Service Factor: 1.15
 Ground Lug: Required
 Construction: see below
 Weight: * Lbs.

REMARKS

1. Starters to be provided by Purchaser.
2. Conduit box shall be cast iron.
3. No exposed aluminum parts are acceptable.
4. Severe duty, energy efficient.