E 170

DEMO of 2" HOT OIL RETURN LINE TO D-470

REMOVAL OF D-470 FOR REPAIRS

SAFETY

PROCEDURE

Step	Action
1	JOB MUST BE WALKED OUT & UNDERSTOOD BY EVERYONE BEFORE THE PERMIT IS ISSUED
2	ALL LINE OPENINGS MUST BE IDENTIFIED, WITH LINE OPENING STICKERS, PIPE PAINTED PURPLE
3	MONOGOGGLES ARE REQUIRED FOR LINE OPENINGS
4	SAFETY HARNESS MUST BE USED FOR WORKING ABOVE GROUND LEVELS
5	EACH PERSON ON THE JOB MUST HAVE NORMAL BLOCK SAFETY EQUIPMENT ON HIS PERSON
6	MUST HAVE THE APPROVAL OF THE SAFETY OBSERVER TO START HOT WORK
7	IF A SLIP BLIND OR BULL BLIND IS INSTALLED OR REMOVED, IT MUST BE UPDATED ON BLIND LIST FOR THE JOB
8	FOLLOW SAFETY REFERANCE A-6 FOR PIPE STOPPER
9	OIL PADS SHOULD BE ON HAND WHEN SLIP BLINDING EQUIPMENT FOR HOT WORK
10	SPECIAL PRECAUTIONS WHEN DEALING WITH SYSTEM
10A	HOT OIL WHEN EMPTING SYSTEM

DEMO of 2" HOT OIL RETURN LINE TO D-470

10B PIPE STOPPER PROCEDURE NEEDS TO BE FOLLOWED S.& L. P. A-6 WITH CHECK SHEET FILLED OUT

10C OIL SHEEN IF LINES ARE NOT TAKEN DOWN PROPERLY

10D A DOUBLE BLOCK & BLEED WILL BE USED FOR ISOLATION ON R-250 A / B RETURN OIL LINES

(SIZE DRAWING)

15 LIFTING PERMIT IS REQUIRED FOR D-470 REMOVAL.

16 DOWELL WILL CLEAN D-470.

EXPLANATIONS OF EACH STEP

ACT	Y	DESCRIPTION	EQUIP	ENGR	AREA	DUR	CAL	MAN_HOURS	TYPE WORK	CREW	CHAMPS
		<LINE	LINE-DESCRIPTION					MAN-HRS	C.E.CODE	QUANTITY	MHrs/EACH >
SDD470-A1		BUILD SCAFFOLD TO ISOLATE H/O LINE				8	16	.0	SCAFF	S	
			D-470	SD	TRICE	HOT OIL		PREWORK	I		
		< 1	SCAFFOLD AT E-52 RETURN LINE					.0		0	. >
		< 2	SCAFFOLD AT 3" PUMP RECIRC. LINE					.0		0	. >
		< 3	SCAFFOLD AT COLD CUT & WELD					.0		0	. >
SDD470-B1		REMOVE INSULATION TO SLIP BLIND H/O LINE				8	16	6.0	INSUL	N	
			D-470	SD	TRICE	HOT OIL		PREWORK	I		
		< 1	REMOVE INSULATION TO INSTALL 2" S/B					1.0		0	. >
		< 2	REMOVE INSULATION TO INSTALL 3" S/B					1.0		0	. >
		< 3	REMOVE INSULATION TO INSTALL 8" S/B					2.0		0	. >
		< 4	REMOVE INSULATION TO CUT & WELD LINE					1.0		0	. >
		< 5	REMOVE INSULATION TO INSTALL 8" S/B					1.0		0	. >
SDD470-C1		CLEAR D-470 & BAD TRACING LINES				16	5	.0	OP	O	
			D-470	SD	TRICE	HOT OIL		PREWORK	I		
		< 1	SEE CLEAR PROCEDURE					.0		0	. >
		< 2	COOL DOWN OIL IN D-470					.0		0	. >
		< 3	EMPTY D-470 TO T-252					.0		0	. >
		< 4	LOW POINT D-470 TO T-252					.0		0	. >
SDD470-C2		DYE CHECK PAD EYES ON D-470				4	21	.0	MTS	MTS	
			D-470			HOT OIL					
		< 1	DYE CHECK PAD EYES ON D-470					.0		0	. >
SDD470-D1		S/B D-470 HOT OIL RETURN LINE				5	5	7.7	PF	PF	
			D-470	SD	TRICE	HOT OIL			I		
		< 1	SLIP BLIND E-52 RETURN D-470 SIDE					1.5		0	. >
		< 2	SLIP BLIND P-470 RECIRC. D-470 SIDE					.0		0	. >
		< 3	SLIP BLIND BYPASS R-250A RETURN D-470 SIDE					3.1		0	. >
		< 4	SLIP BLIND BYPASS R-250B RETURN D-470 SIDE					3.1		0	. >

ACT	DESCRIPTION	DUR	CAL	MAN_HOURS	TYPE WORK	CREW	CHAMPS
	EQUIP ENGR AREA						
<LINE	LINE-DESCRIPTION			MAN-HRS	C.E.CODE	QUANTITY	MHrs/EACH >
SDD470-E1	PREPARE TO COLD CUT AND WELD FLG 2" TRACING RETR	6	5	11.1	PF	PF	
	D-470 SD TRICE HOT OIL				I		
< 1	DEMO 4' 2" HOT OIL RETURN LINE			2.0		0	. >
< 2	CLEAR RESIDUE OIL BEFORE INSTALLING SEWER PLUG			2.0		0	. >
< 3	INSTALL SEWER PLUG			1.5		0	. >
< 4	WELD 2" 300# FLG.			2.1		0	. >
< 5	INSTALL 2" 300# VALVE ON NEW FLG.			2.0		0	. >
< 6	INSTALL B/B ON VALVE			1.5		0	. >
SDD470-F1	REMOVE ALL SLIP BLINDS ON HOT OIL RETURN LINE	5	5	9.5	PF	PF	
	D-470 SD TRICE HOT OIL				I		
< 1	REMOVE S/B E-52 RETURN LINE & BUTTON UP			1.5		0	. >
< 2	REMOVE S/B P-470 RECIRC. & BUTTON UP			1.8		0	. >
< 3	REMOVE S/B BYPASS R-250A & BUTTON UP			3.1		0	. >
< 4	REMOVE S/B BYPASS R-250B & BUTTON UP			3.1		0	. >
SD[illegible] J1	INSULATE D-470 VESSEL	40	21	.0	INSUL	N	
	D-470 HOT OIL			PREWORK			
< 1	INSULATE D-470 VESSEL			.0		0	. >
SDD470-J2	CHECK SCAFFOLD ON D-470	4	21	.0	SCAFF	S	
	D-470 HOT OIL			PREWORK			
< 1	CHECK SCAFFOLD ON D-470			.0		0	. >
SDD470-K1	REMOVE EXISTING D-470 INSULATION	8	5	.0	INSUL	N	
	D-470 HOT OIL						
< 1	REMOVE EXISTING D-470 INSULATION			.0		0	. >
SDD470-L1	REMOVE D-470 INSTR.	6	5	12.0	I/E	I/E	
	D-470 HOT OIL						

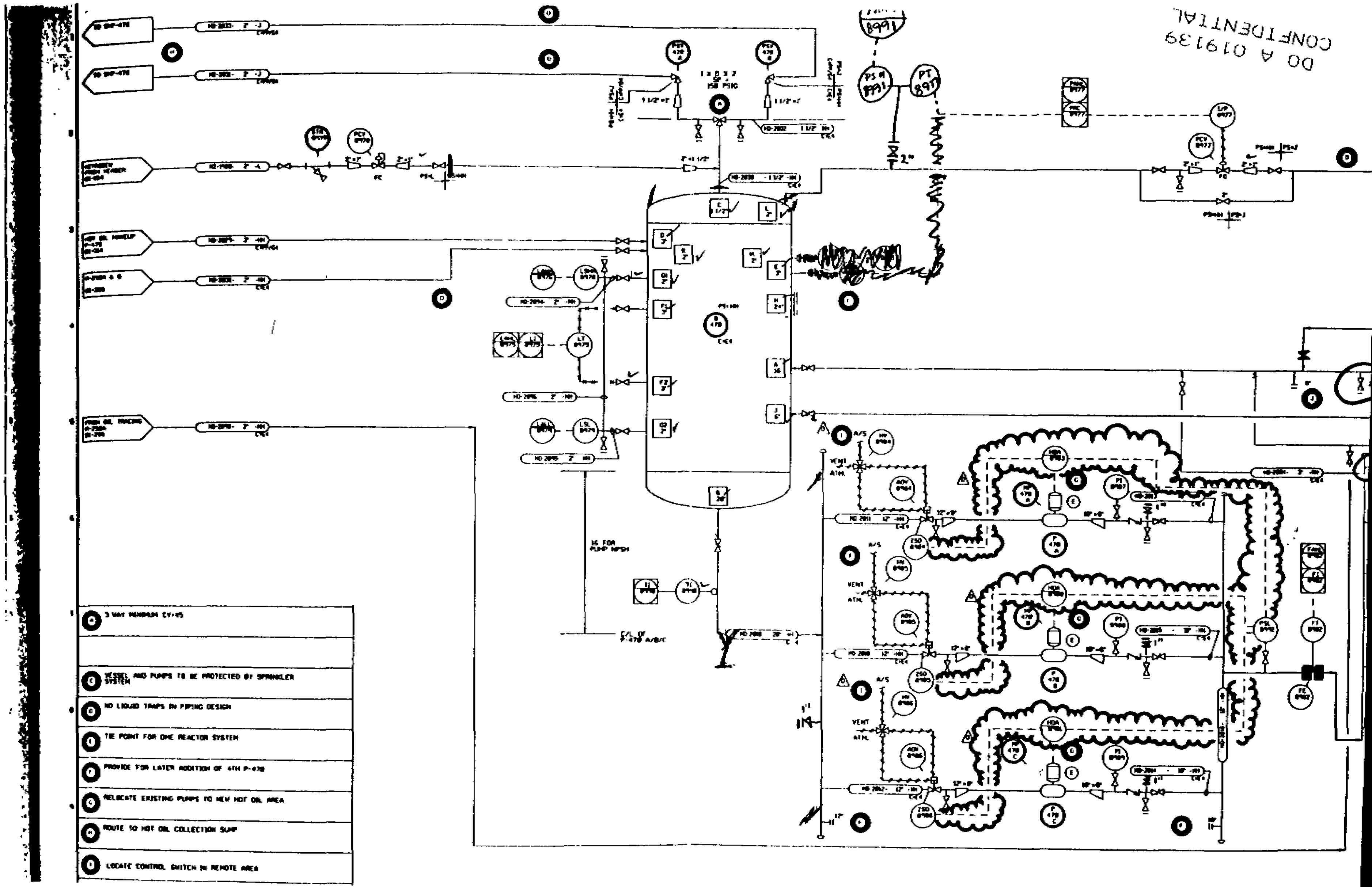
ACT	DESCRIPTION	DUR	CAL	MAN_HOURS	TYPE WORK	CREW	CHAMPS
	EQUIP ENGR AREA						
<LINE	LINE-DESCRIPTION			MAN-HRS	C.E.CODE	QUANTITY	MHrs/EACH >
< 1	REMOVE PSH-8991			2.0		0	. >
< 2	REMOVE PT-8977			2.0		0	. >
< 3	REMOVE LSHH-8976			2.0		0	. >
< 4	REMOVE LSL-8979			2.0		0	. >
< 5	REMOVE LT-8975			2.0		0	. >
< 6	DISCONNECT GROUND CABLE			2.0		0	. >
SDD470-M1	DISCONNECT AND REMOVE D-470	10	5	55.6	PF	PF	
	D-470 HOT OIL						
< 1	DISCONNECT N2 LINE TO PSV'S N2-1900			1.5		0	. >
< 2	REMOVE HD-2030 FROM D-470 TO 3-WAY VALVE			3.0		0	. >
< 3	B/B BOTTOM OF 3 WAY VALVE & SPOOL			1.5		0	. >
< 4	REMOVE VENT TO C/L SPOOL			4.5		0	. >
< 5	B/B VENT AND C/L			1.5		0	. >
< 6	DISCONNECT HO-2029 3" 300#			1.7		0	. >
< 7	DISCONNECT HO-2058 16" 300#			7.4		0	. >
< 8	DISCONNECT HO-2056 6" 300#			2.6		0	. >
< 9	DISCONNECT HO-2010 20" 300#			8.8		0	. >
< 10	REMOVE LSHH STRONG BACK & VALVES			3.0		0	. >
< 11	B/B VALVES ON STRONG BACK			3.0		0	. >
< 12	REMOVE VALVES FOR LT-8975 WRAP IN VISQUEEN			3.4		0	. >
< 13	~~REMOVE VALVE ON NOZZLE B 3" 300#~~			1.3		0	. >
< 14	REMOVE VALVE ON NOZZLE M 2" 300#			1.0		0	. >
< 15	REMOVE VALVE ON NOZZLE E 3" 300#			1.4		0	. >
< 16	WRAP VALVES IN VISQUEEN			1.0		0	. >
< 17	REMOVE ANCHOR BOLTS			1.0		0	. >
< 18	REMOVE D-470			8.0		0	. >
< 19	D-470 WEIGHTS 45,600#			.0		0	. >
< 20	TOP OF D-470 TO FACE BACK OF TRUCK			.0		0	. >
SDD470-N1	SET UP TO WASH D-470	7	5	42.0	PF	PF	
	D-470 HOT OIL						
< 1	INSTALL 5 EA. 2" B/B 300#			7.5		0	. >
< 2	INSTALL 1 EA. 1-1/2" B/B 300#			.5		0	. >
< 3	INSTALL 3 EA. 3" B/B 300#			7.2		0	. >
< 4	INSTALL 1 EA. 6" B/B 300#			2.6		0	. >
< 5	INSTALL 1 EA. 16" 300# FLG. W/3" FITTING			7.4		0	. >
< 6	INSTALL 1 EA. 20" 300# FLG. W/3" FITTING			8.8		0	. >
< 7	MOVE TO DECON AREA			8.0		0	. >
< 8	INSTALL 3" 300# FLG. W/3" FITTING			.0		0	. >

ACT	fY	DESCRIPTION	EQUIP	ENGR	AREA	DUR	CAL	MAN_HOURS	TYPE WORK	CREW	CHAMPS
		<LINE	LINE-DESCRIPTION					MAN-HRS	C.E.CODE	QUANTITY	MHrs/EACH >
SDD470-N10		OPERATION TO SET UP TO DRY D-470				2	4	.0	OP	0	
			D-470		HOT OIL						
		< 1	TIE N2 TO D-470 TO DRY					.0		0	. >
		< 2	ESTABLISH FLOW ON ALL NOZZLES					.0		0	. >
SDD470-N11		DRY D-470				12	4	.0	N2	N2	
			D-470		HOT OIL						
		< 1	DRY D-470					.0		0	. >
SDD470-N12		REMOVE BULL BLINDS & FITTINGS ON D-470				0	5	.0	PF	PF	
			D-470		HOT OIL						
		< 0						.0		0	. >
SDD470-N2		CLEAN D-470				16	4	.0	D/W	D/W	
			D-470		HOT OIL						
		< 1	CLEAN D-470					.0		0	. >
		< 2	HAS TO BE CLEAN & READY FOR V/E					.0		0	. >
SDD470-N3		PURGE D-470				2	4	.0	OP	0	
			D-470		HOT OIL						
		< 1	PURGE D-470 WITH AIR					.0		0	. >
SDD470-N4		PULL MANWAY ON D-470				0	5	.0	PF	PF	
			D-470		HOT OIL						
		< 1	PULL 24" 300# MANWAY					.0		0	. >
SDD470-N5		RUN BAG SAMPLE ON D-470				2	4	.0	OP	0	
			D-470		HOT OIL						

ACTIVITY	DESCRIPTION			DUR	CAL	MAN_HOURS	TYPE WORK CREW	CHAMPS
	EQUIP	ENGR	AREA					
<LINE	LINE-DESCRIPTION					MAN-HRS	C.E.CODE	QUANTITY MHrs/EACH >
< 1	RUN BAG SAMPLE ON D-470					.0		0 . >
< 2	INSPECT FOR INTERNAL DAMAGE					.0		0 . >
< 3	NDT V/E INSPECT FROM MANWAY					.0		0 . >
SDD470-N6	SEND D-470 TO SHOP			4	5	8.0	PF	PF
	D-470		HOT OIL					
< 1	SEND D-470 TO SHOP FOR REPAIR					8.0		0 . >
SDD470-N7	REPAIR D-470			30	4	.0	FAB SHOP	OUT
	D-470		HOT OIL					
< 1	REPLCE NOZZLE H 24" 300#					.0		0 . >
< 2	REPLACE NOZZLE C 1-1/2" 300#					.0		0 . >
< 3	REPLACE NOZZLE L 2" 300#					.0		0 . >
< 4	CMP TO INSPECT D-470 PRIOR TO HYDRO					.0		0 . >
< 5	HYDRO D-470 TO 450# FOR ONE HOUR					.0		0 . >
SDD470-N8	SHIP D-470 BACK TO CMP			4	5	8.0	PF	PF
	D-470		HOT OIL					
< 1	SHIP D-470 BACK TO CMP					8.0		0 . >
SDD470-N9	SET UP TO DRY D-470			2	5	8.0	PF	PF
	D-470		HOT OIL					
< 1	INSTALL M/W LOOSE 24" 300#					2.0		0 . >
< 2	LOOSEN UP ALL 10 B/B'S					6.0		0 . >
SDD470-01	INSTALL NEW D-470			9	5	52.2	PF	PF
	D-470		HOT OIL					
< 1	D-470 WEIGHTS 45,600#					.0		0 . >
< 2	INSTALL NEW D-470					4.0		0 . >
< 3	REINSTALL VALVE ON NOZZLE D 3" 300#					2.8		0 . >
< 4	REINSTALL VALVE ON NOZZLE M 2" 300#					2.0		0 . >
< 5	REINSTALL VALVE ON NOZZLE E 3" 300#					2.8		0 . >
< 6	REINSTALL VALVES FOR LT-8975 2" 300#					4.0		0 . >

ACT	DESCRIPTION			DUR	CAL	MAN_HOURS	TYPE WORK	CREW	CHAMPS
	EQUIP	ENGR	AREA						
<LINE	LINE-DESCRIPTION					MAN-HRS	C.E.CODE	QUANTITY	MHrs/EACH >
SDD470-P1	REINSTALL D-470 INSTR.			6	5	12.0	I/E	I/E	
	D-470		HOT OIL						
< 1	REINSTALL PSH-8991					2.0		0	. >
< 2	REINSTALL PT-8977					2.0		0	. >
< 3	REINSTALL LSHH-8976					2.0		0	. >
< 4	REINSTALL LSL-8979					2.0		0	. >
< 5	REINSTALL LT-8975					2.0		0	. >
< 6	RECONNECT D-470 GROUND CABLE					2.0		0	. >
SDD470-Q1	PRESSURE TEST D-470			4	4	.0	OP	0	
	D-470		HOT OIL						
< 1	PRESSURE TEST D-470					.0		0	. >
SDD470-Q2	START UP D-470			8	4	.0	OP	0	
	D-470		HOT OIL						
< 1	START UP D-470					.0		0	. >
SDD470-R1	COMPLETE INSULATION ON D-470			6	5	42.0	INSUL	N	
	D-470		HOT OIL						
< 1	COMPLETE INSUL ON D-470					.0		0	. >
< 2	INSULATE 16" RETURN LINE AT D-470					14.0		0	. >
< 3	INSULATE 2" E-52 RETURN LINE					4.0		0	. >
< 4	INSULATE 3" PUMP RECIRC. LINE					4.0		0	. >
< 5	INSULATE 8" BYPASS R-250A RETURN					10.0		0	. >

ACTIVITY	DESCRIPTION				DUR	CAL	MAN_HOURS	TYPE WORK	CREW	CHAMPS
	<LINE	EQUIP LINE-DESCRIPTION	ENGR	AREA			MAN-HRS	C.E.CODE	QUANTITY	MHrs/EACH >
	< 6	INSULATE 8" BYPASS R-250B RETURN					10.0		0	. >



A	3 WAY MINIMUM CV=45
C	VESSEL AND PUMPS TO BE PROTECTED BY SPRINKLER SYSTEM
D	NO LIQUID TRAPS IN PIPING DESIGN
E	TIE POINT FOR ONE REACTOR SYSTEM
F	PROVIDE FOR LATER ADDITION OF 4TH P-470
G	RELOCATE EXISTING PUMPS TO NEW HOT OIL AREA
H	ROUTE TO HOT OIL COLLECTION SUMP
I	LOCATE CONTROL SWITCH IN REMOTE AREA

D-470 COOLDOWN PROCEDURE

Prework: Scaffold E-52 return valve.

This procedure assumes:

a. HCl Purification is down .
b. Both R-250's are down, padded and depadded, and purging with nitrogen to atmosphere.
c. Only one hot oil pump is running.

See attached drawing.

1. Manually block in oil to and from E-52.

2. Manually block oil to and from R-250A.

   a. Block in FCV upstream valve.
   b. Close flow control valve on TDC.
   c. Block E-470 valve to R-250A temperature control loop.
   d. Block E-480 valve to R-250A temperature control loop.

3. Manually block in 475 psig steam to E-470.

4. Line up E-475 cooldown loop.

   a. Turn on E-475 fan.
   b. Slowly open 3 valves near P-475 to allow hot oil to fill up cooldown piping. (see drawing)
   c. Slowly open R-250B cooldown HIC valve (HIC-6066, TDC group 151, slot 6) until it is 100 % open.

5. Manually block oil to R-250B.

   a. Block E-470 valve to R-250A temperature control loop.
   b. Block E-480 valve to R-250A temperature control loop.

6. Monitor the R-250B hot oil flow to ensure oil is flowing through E-475 and back to D-470.

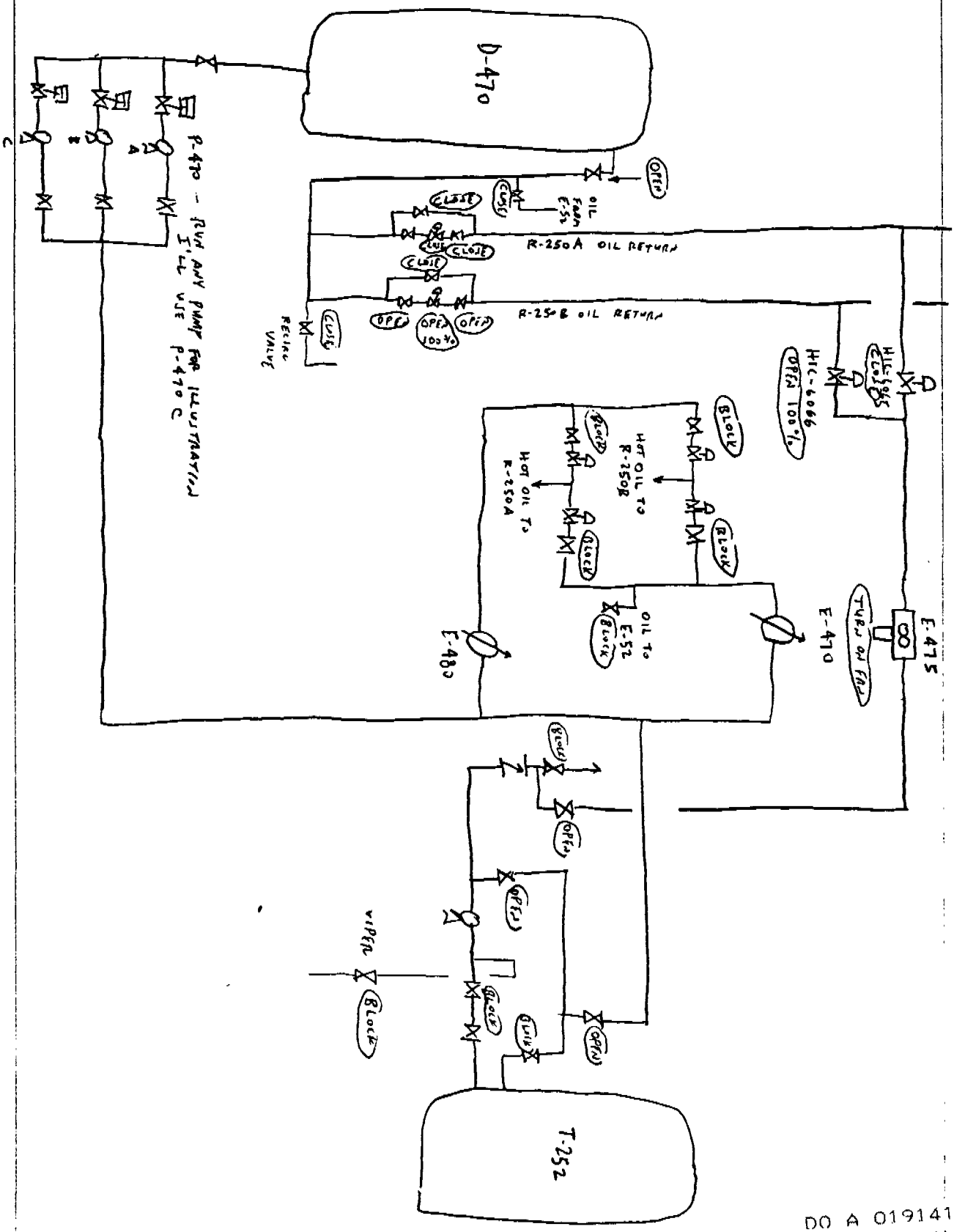
7. Monitor the oil temperature in D-470. When the oil gets below 90 deg C, we will begin putting it in T-252.

94°C
at 0400

JJS
6/93

JJ 6/93

D-470 COOL DOWN



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D-470 DRAIN AND CLEARING PROCEDURE

Prework: Ensure T-252 level is low enough to handle D-470 liquid and associated piping.

Run tubing to low point D-470 to T-252 (See tubing drawing).

Cut a red tag master for pulling D-470 master and write out tags. (See attached list)

Scaffold D-470.

Locate 3 P-470 AOV clamps.

This procedure assumes:

a. Oil is circulating as per the Cooldown Procedure.
b. Oil temperature in D-470 is below 90 deg C.

See attached drawing.

1. Slowly open the recirculation valve at T-252 (Valve #1).

2. Close the upstream recirculation valve on P-475 (Valve #2). This will allow oil from D-470 to enter T-252. Monitor both the drum and tank level on TDC as well as the pressure on the tank in the field.

3. Close the R-250B FCV upstream block valve (Valve #3) as well as the R-250B cooldown HIC valve (Valve #4).

4. Shut off E-475 fan.

5. When D-470 goes empty, go to the P-470 pumps and shutdown the running pump when it gases out.

6. Close the D-470 pressure control valve and pressure up D-470 to about 25 psig.

   Note: There is a hole in the manway so rope off the area to prevent anyone from being hit with a oil laden mist.

7. Low point D-470 to T-252 via the prerun tubing. When complete open bleeds to ensure all the oil is removed.

8. Red tag the system as per drawing.

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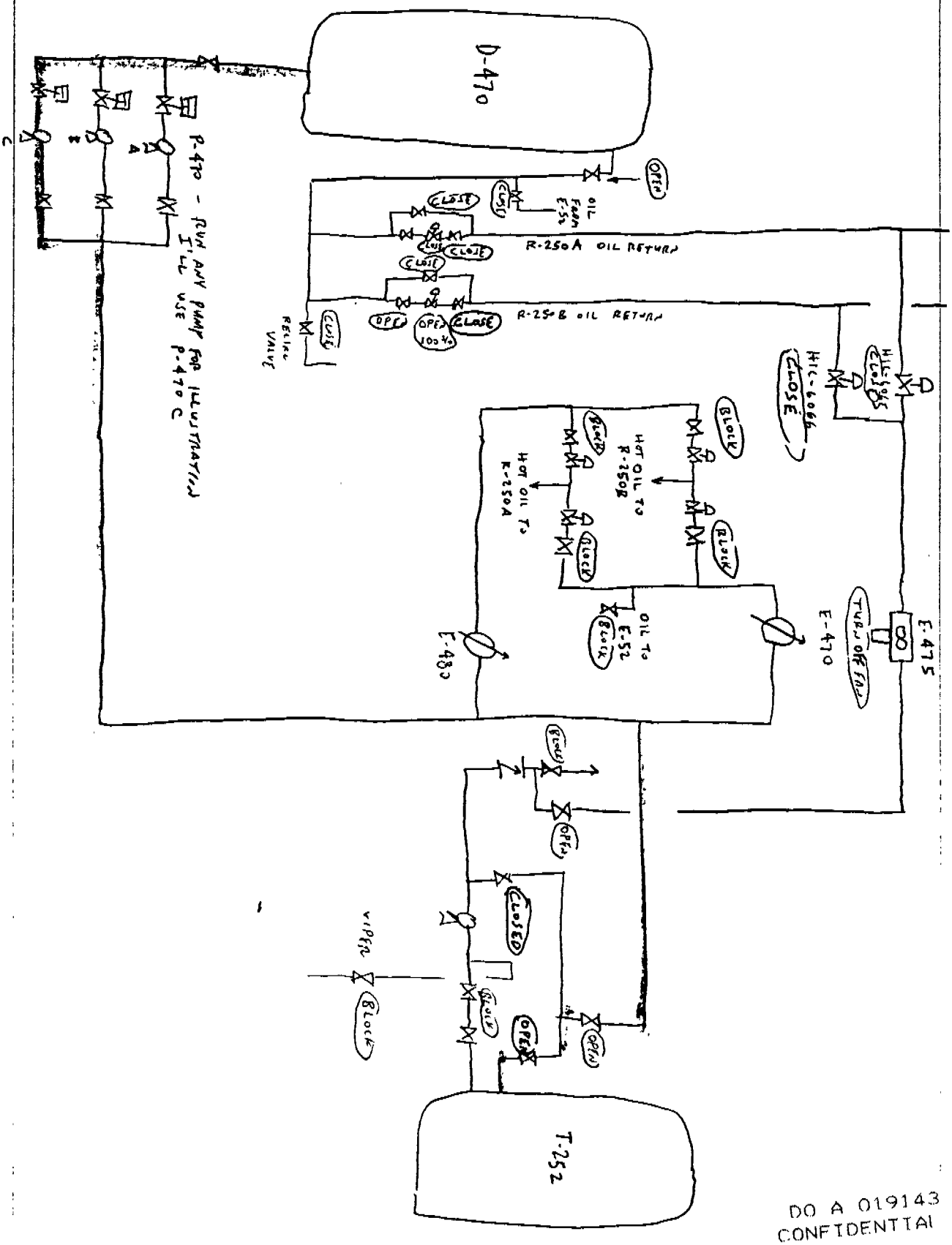
6/93

JJ 6/93

D-470 DRAIN PROCEDURE



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RED TAG LIST FOR PULLING D-470

#	TAG DESCRIPTION	OPEN / CLOSED O/C
1	D-470 PCV UPSTREAM B.V.	C
2	D-470 PCV BYPASS B.V.	C
3	N_2 TO D-470 DOWNSTM B.V.	C
4	R-250A FCV BYPASS B.V.	C
5	R-250A FCV UPSTREAM B.V.	C
6	R-250A FCV BLEED VALVE	O
7	R-250B FCV BYPASS P.V.	C
8	R-250B FCV UPSTREAM B.V.	C
9	R-250B FCV BLEED VALVE	O
10	E-52 OIL RETURN B.V.	C
11	P-470 RECIRCULATION B.V.	C
12	P-470 SUCTION BLEED VALVE	O
13	P-470A CLAMP	
14	P-470A F/S	OFF
15	P-470A AOV SWITCH	C
16	P-470B CLAMP	
17	P-470B F/S	OFF
18	P-470B AOV SWITCH	C
19	P-470C CLAMP	
20	P-470C F/S	OFF
21	P-470C AOV SWITCH	C

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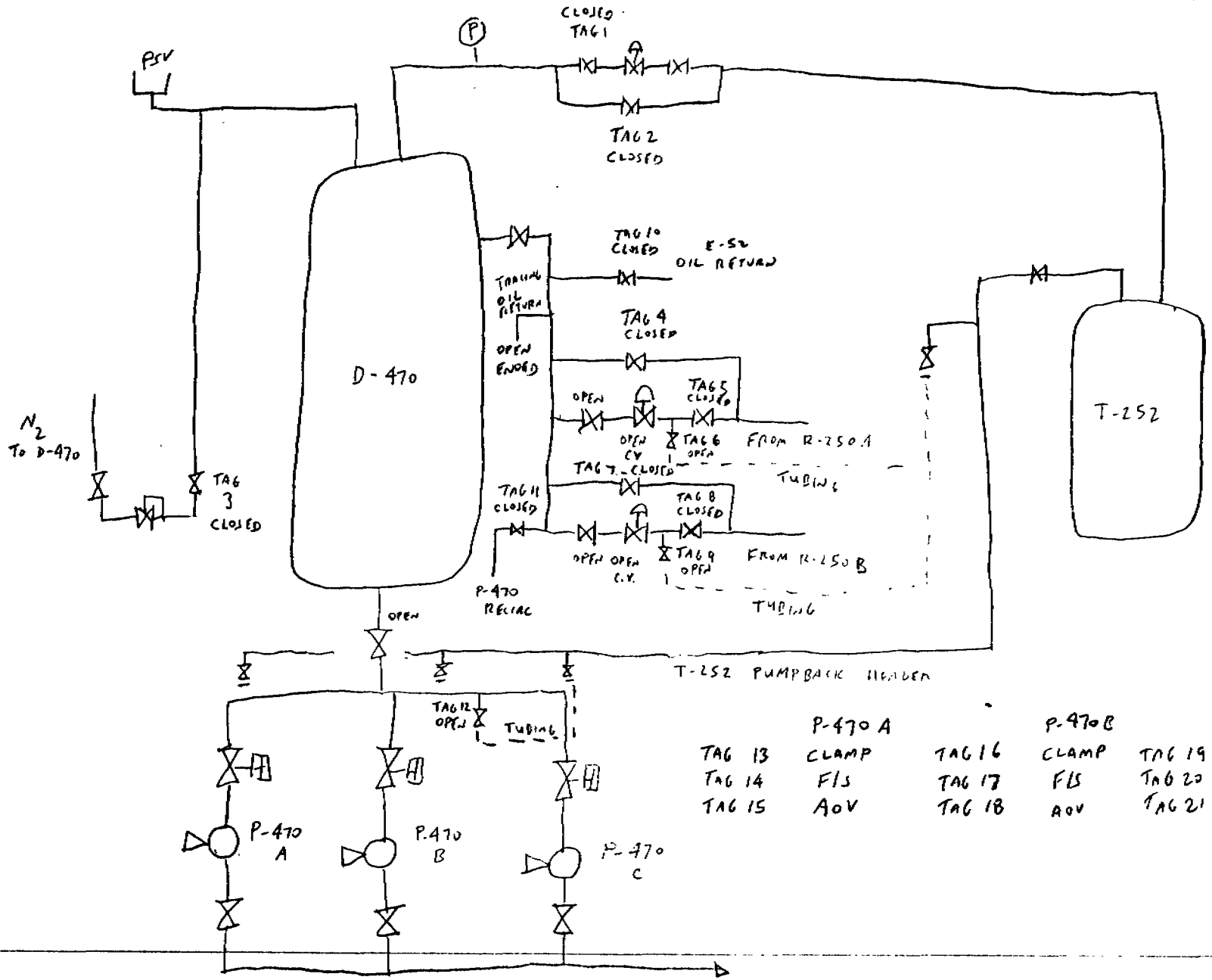
D-470 DRAINING TUBING DIAGRAM AND REQ TAG LIST FOR PULLING D-470



	P-470 A		P-470 B		P-470 C
TAG 13	CLAMP	TAG 16	CLAMP	TAG 19	CLAMP
TAG 14	F/S	TAG 17	F/S	TAG 20	F/S
TAG 15	AOV	TAG 18	AOV	TAG 21	AOV

CHECKLIST (ATTACHMENT 1)

NOTIFICATION OF PROCESS CHANGE CHECKLIST

Originator: JOHN SACKS Date of Origination: OIL TRACING RETURN LINE DEMO

P ' Date of Change 10-7-93 Area: HOT OIL / HYDRO

F . t ✓ Temporary ______ From ______ To ______

Description and Location of Change (Scope) COLD CUT LINE AND WELD A FLANGE ON PIPE USING PLUMBER'S PLUG PROCEDURE, BULL BLIND NEW FLANGE

Technical Basis for Change: LINE IS PLUGGED AND WE NO LONGER USE HOT OIL FOR TRACING ON THE R-750'S, THERE IS NO ISOLATION VALVE AT D-470 SO A S/D IS THE ONLY TIME WE CAN CUT LINE.

Impact on: ☐ Safety ☐ Loss Prevention ☐ Environment ☐ Health

Type of Change:

- ☐ Alarm
- ☐ Shutdown Point
- ☐ Instrument
- ☐ Process Computer Control
- ☐ Addition or Removal of Equipment
- ☒ Piping Modification
- ☐ Equipment/Material Modification
- ☐ Chemical
- ☐ Job Procedure
- ☐ Other

Pre-Modification Checklist:

Applicable	N/A	Initials	
	✓		Consult piping and equipment specifications.
	✓		Perform Reactive Chemicals testing. 1/7/93In-Progress?
	✓		Add materials involved to Toxic Substance Control Act (TSCA) inventory.
	✓		Calculate impact on F&EI and CEI
	✓		Comply with Engineering Practices.
	✓		Comply with Technology Center guidelines.
	✓		Comply with Dow "Environmental Protection Guidlelines for Operations".
		JJd	Comply with Safety and Loss Prevention requirements.
			Consult maintenance. (Name) KEN TRICE / ADAM MICHEL
	✓		Consult instrument and electrical technician. (Name)
	✓		Consult parts technician.(Name)
	✓		Evaluate and modify relief system.(Name)
	✓		Contact Industrial Hygiene.(Name)
	✓		Contact Process Engineering. (Name)
	✓		Complete required reviews. (Name them)
	✓		Other

Post-Modification Checklist: (Before startup)

Applicable	N/A	Initials	
	✓		Perform pre-startup audit.
	✓		Instrument loop drawings.
	✓		Electrical drawings.
	✓		Complete or update training program.
✓		JJJ	Job procedures written and approved.
✓		JJJ	P&ID's, process flow sheets and plot plans updated.
	✓		Personnel trained on the change.
	✓		Critical instrument checklist updated.
	✓		Computer code and documentation changed.

FOLLOW UP

ls:	Name	Date
tor	[signature]	6/3/93
First Reviewer	[signature]	6/4/93
Department Head/Superintendent	[signature]	6/7/93

Form No. 470-00162-291

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RED TAG LIST FOR DEMOING HOT OIL TRACING RETURN LINE

NOTE: THIS LIST ONLY APPLIES IF D-470 HAS BEEN PULLED.

1) R-250 A FCV BYPASS B.V. - CLOSED
2) R-250 A FCV BYPASS SLIPBLIND
3) R-250 A FCV UPSTREAM B.V. - CLOSED
4) R-250 A FCV DOWNSTREAM B.V - CLOSED
5) R-250 A FCV BLEED - OPEN
6) R-250 B FCV BYPASS B.V. - CLOSED
7) R-250 B FCV BYPASS SLIPBLIND
8) R-250 B FCV UPSTREAM B.V. - CLOSED
9) R-250 B FCV DOWNSTREAM B.V. - CLOSED
10) R-250 B FCV BLEED - OPEN
11) P-470 RECIRC. B.V. - CLOSED
12) P-470 RECIRC. SLIPBLIND
13) E-52 OIL RETURN B.V. - CLOSED
14) E-52 OIL RETURN SLIPBLIND
15) D-470 RETURN BIG B/V - OPEN
16) N_2 SUPPLY TO PLUMBER'S PLUG
17) PLUMBER'S PLUG

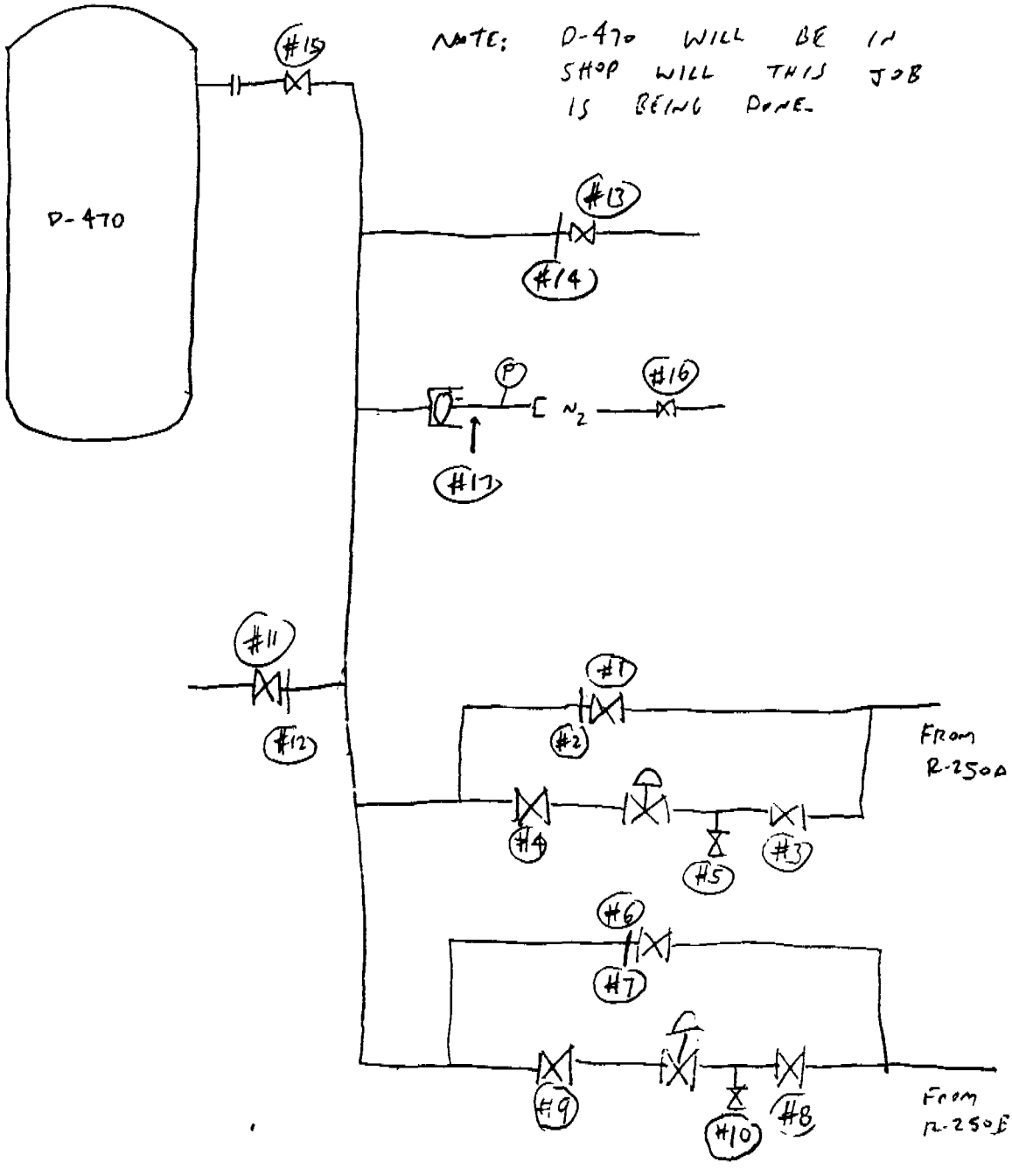
NOTES

1) BEFORE TAGGING ENSURE ALL OIL IS DRAINED FROM LINE
2) TO DO COLD CUTS, TAGS 2, 7, 12, 14, 16, 17 DO NOT HAVE TO BE HUNG BUT IT WOULD BE A GOOD IDEA TO SLIPBLIND IT AND HANG 2, 7, 12, 14
3) CLEAN LINE WHERE PLUMBER'S PLUG WELD IS SUPPOSED TO BE MADE WITH MI BEFORE INSERTING PLUG
4) IF N_2 PRESSURE ON LINE EXCEEDS 4" WATER, SHUTDOWN JOB
5) VERIFY N_2 FLOW T/ LINE.
6) NEED FIRE WATCH
7) FILL OUT PLUMBER'S PLUG PERMIT
8) SUPERINT. MUST SIGN PERMIT.
9) NEED M.O.C. FORM COMPLETED
10) USE 300#, 2" SLIP ON FLANGE.
11) GASKET MUST BE FLEXITALLIC GRAPHITE.

JJS 6/9

HOT OIL TRACING PLUMBER'S PLUG WELD

NOTE: D-470 WILL BE IN SHOP WILL THIS JOB IS BEING DONE.



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Procedure TO Work On Hot Oil Return Line

1. Make sure oil sorb pads are in place under each line that is opened or cold cut.

2. All break points must be identified, signed, and dated.

3. Install a .16"-300# slip blind at the Valve on the return header at D-470. On the upstream side.

4. Install a 2" - 300# slip blind at the valve on E-52 return at the header on D-470. On the down stream side.

5. Install a 3" - 300# slip blind at the valve on P-470 A/B/C recirculation line at the header to D-470. On the down stream side.

6. R-250-A flow control loop, install a 8"-300# slip blind on the by pass valve. On the down stream side.

7. R-250-B flow control loop, install a 8"-300# slip blind on the by pass valve. On the down stream side.

8. Hot oil tracing return line from R-250 A/B:
   A. Cold cut a 4' section of line out, where it ties into the return line to D-470.
   B. Using a plummer's plug, weld a 2"-300# flange on the stub at the return line to D-470. Be sure to clean the oil out of the stub before installing plummer's plug.

C. Using gray tape, completely cover the open ended pipe where the 4' section was removed.

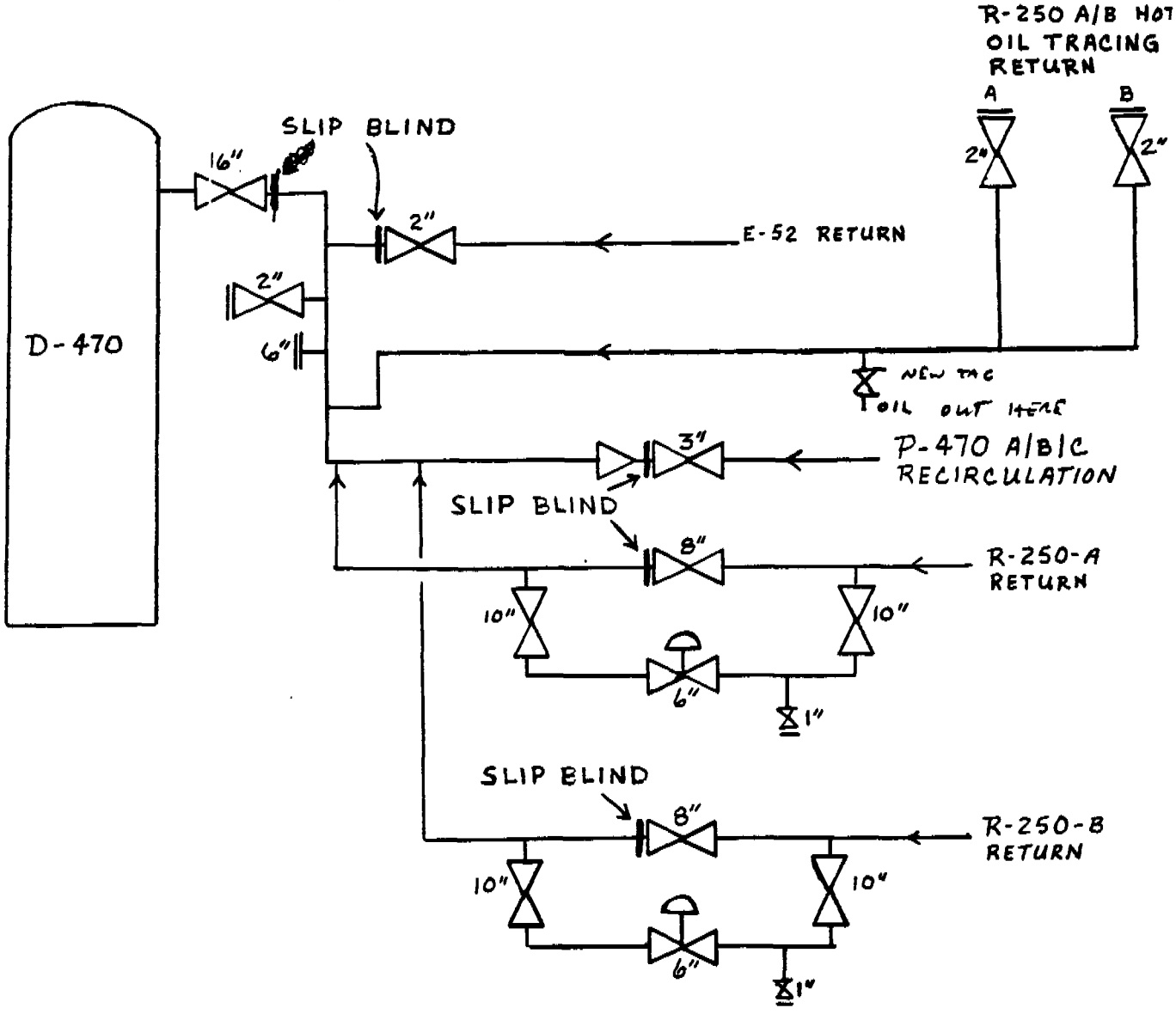
9. Remove one of the 2"-300# valves from the R-250 A/B hot oil tracing return line to D-470.
   A. Bull blind the line where the valve was remove.

10. Install the 2" - 300#, that was removed from R-250 A/E hot oil tracing return line, on the new flange that was welded on the stub at D-470.
   A. Install a bull blind on this valve.

11. Remove the slip blinds that were listed in sections 3, 4, 5, 6 & 7 of this write up.

12. Pressure test the system with N_2 at 150 PSIG.

13. Remove the red tags.
   A, Make sure all bleeds have ball blinds on them.
   B. Valve the system up for normal operation.



SYSTEM

BLIND SIZE	TYPE BLIND	INSTALLED DATE	REMOVED DATE	LOCATION
16" 300#	S/B			Inlet A-470
2" 300#	S/B			E-52 Return on A-470 Side Valve
3" 300#	S/B			P-470A Recirc on A-470 Side Valve
8" 300#	S/B			R-250A Return on A-470 Side By Pass Valve
8" 300#	S/B			R-250B Return On A-470 Side By Pass Valve

BY 4/10/92

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D-470 Procedure

PRE-WORK:

1. Dye check lifting lugs.
2. Set up lifting permit.
3. Build necessary scaffold.
4. Run tubing to clear system.

1. OP - Cool down oil in D-470. - 8 HRS

2. Remove insulation off D-470. - 8 HRS

3. OP - Empty D-470 to T-252. - 4 HRS.

4. OP - Low point D-470 to T-252. - 4 HRS.

5. Remove instruments on D-470.
   A. Remove PSH-8991.
   B. Remove PT-8977.
   C. Remove LSHH-8976.
   D. Remove LSL-8979,
   E. Remove LT-8975.
   F. Disconnect ground cable.

6. Disconnect all piping connected to D-470.
   A. Remove pipe spool going to the PSV's. (1½"-300#)
      B/B the pipe spool and the PSV's 3/way valve.
   B. Disconnect the N2 pad line. (2"-300#)
   C. Remove pipe spool going to the vent C/L. (2"-300#)
      B/B the pipe spool and the vent C/L.

D. Disconnect the oil make up line. (3" - 300#).
E. Disconnect the return oil line. (16" - 300#).
F. Disconnect the recirculation line (6" - 300#),
G. Disconnect the pump suction line (20" - 300#).
H. Remove the LSHH strong back and the valves. (2" - 300#) B/B the valves.
I. Remove the valves for LT-8975. (3" - 300#). Wrap the valves in visqueen to keep dry.
J. Remove spare valves: 2 - 2" - 300#
1 - 3" - 300#
Wrap valves in visqueen to keep dry.
K. Remove anchor nuts.

7 Pull D-470 and put it in the decontamination area.
A. Have plenty oil sorb pads ready to clean up oil.
B. B/B all nozzles on D-470 as soon as possible.
5 - 2" - 300# 1 - 16" - 300#
1 - 1½" - 300# 1 - 20" - 300#
4 - 3" - 300# Set up tie points for Dowell to
1 - 6" - 300# Vapor degrease.
C. WEIGHT 45,600 lbs. — Get lifting permit.
8. Dowell will then vapor degrease D-470.
9. Send D-470 to the shop for repairs.
10. Install D-470 after it has been dried.
A. Install anchor nuts.
B. Install spare valves with B/B's.
2 - 2" - 300#
1 - 3" - 300#

C. Install valves for LT-8975. (2-3"-300#)
D. Install LSHH-8976 strong back and valves. (2-2"-300#)
E. Hook up pump suction. (1-20#-300#).
F. Hook up the recirculation line. (1-6"-300#)
G. Hook up oil return line. (1-16"-300#).
H. Hook up oil make up line (1-3"-300#).
I. Install spool going to the vent c/L. (3-3"-300#)
J. Install spool going to the PSV's. (2-1½"-300#)
K. Hook up the N2 pad to D-470. (1-2"-300#).

10. Install D-470 instrumants and loop check.
A. Install PSH-8991.
B. Install PT-8977.
C. Install LSHH-8976.
D. Install LSL-8979.
E. Install LT-8975.
F. Connect D-470 ground cable.

11. Pressure test D-470 system at 100 PSIG W/N2.
OP — 4 HRS