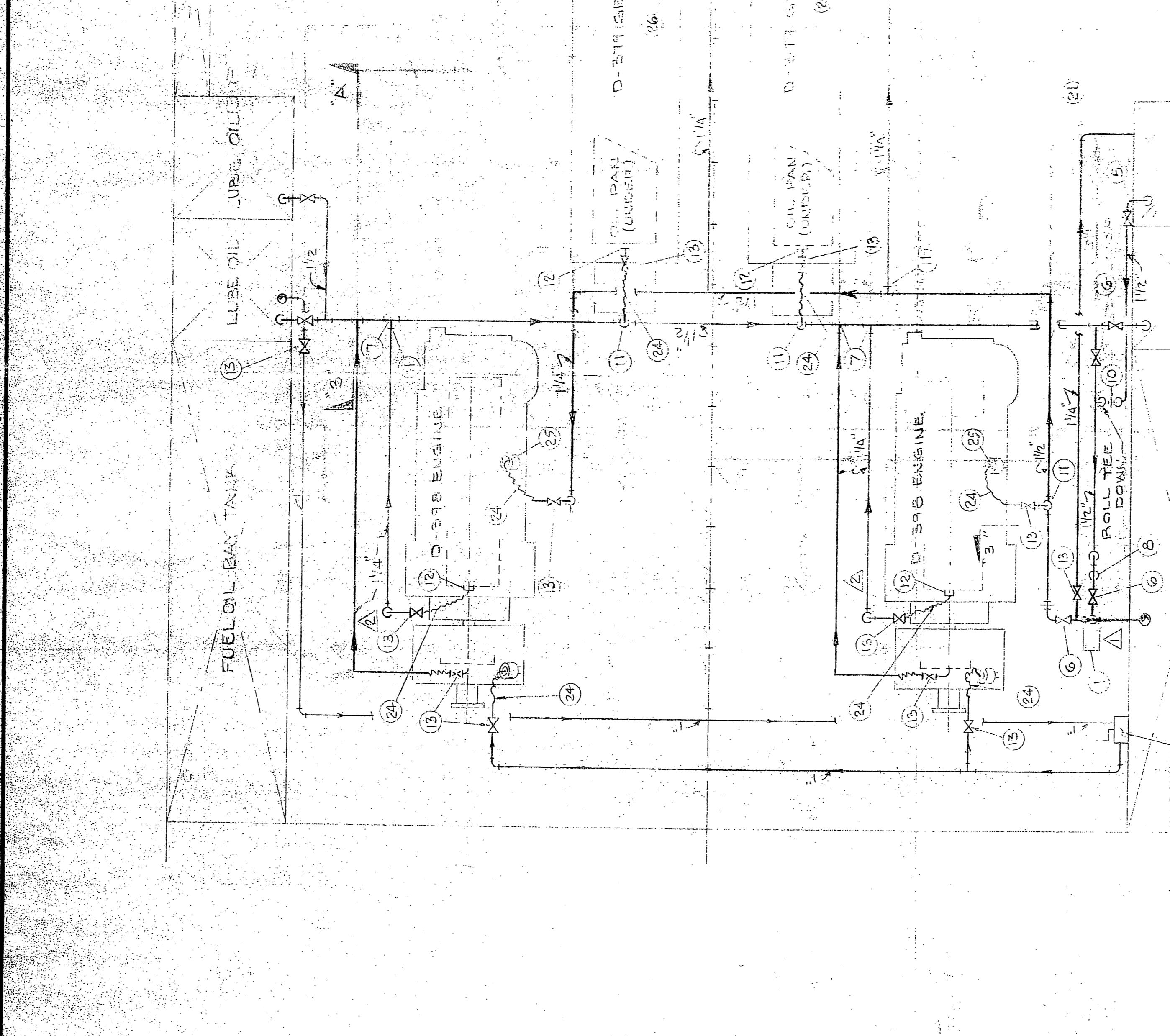
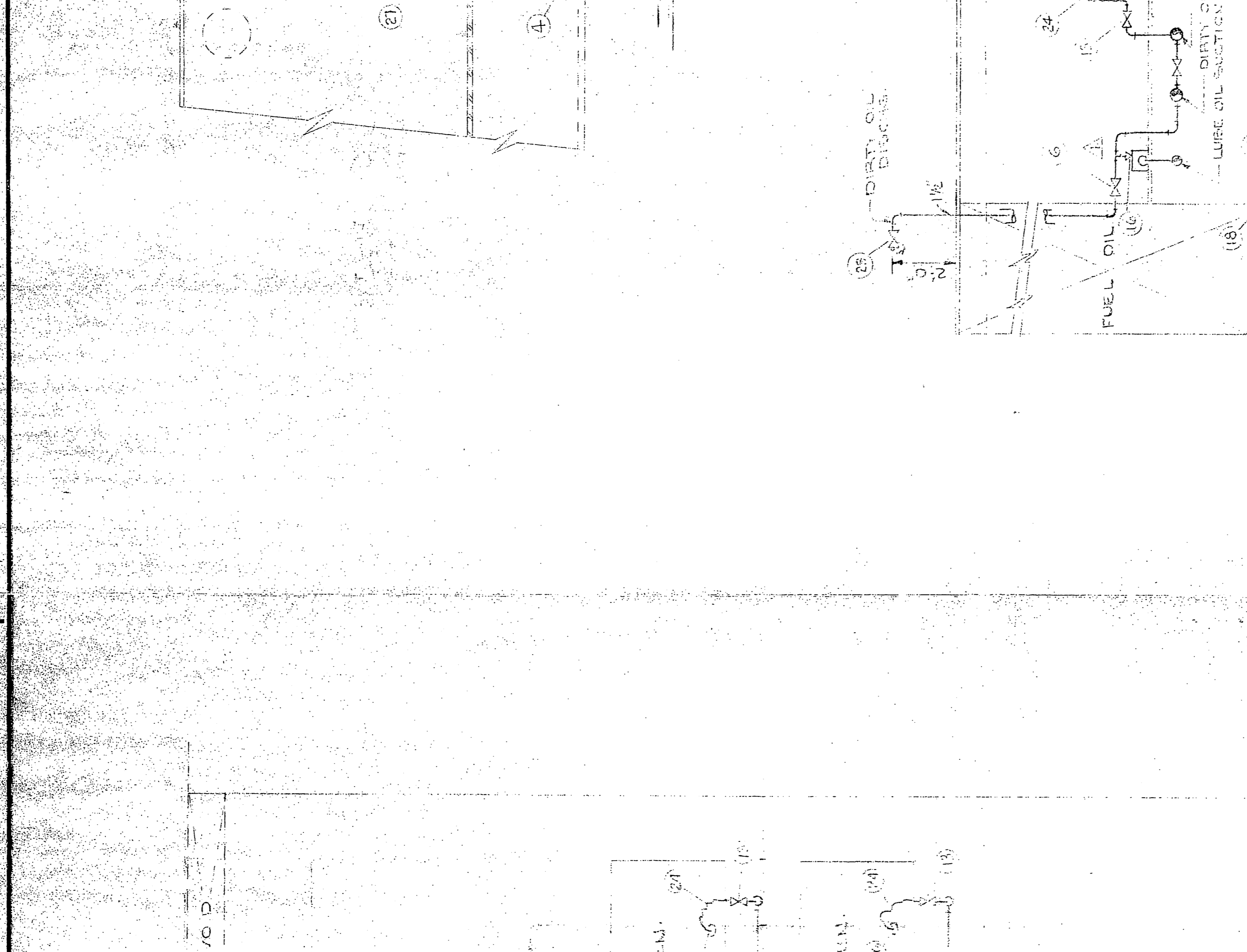
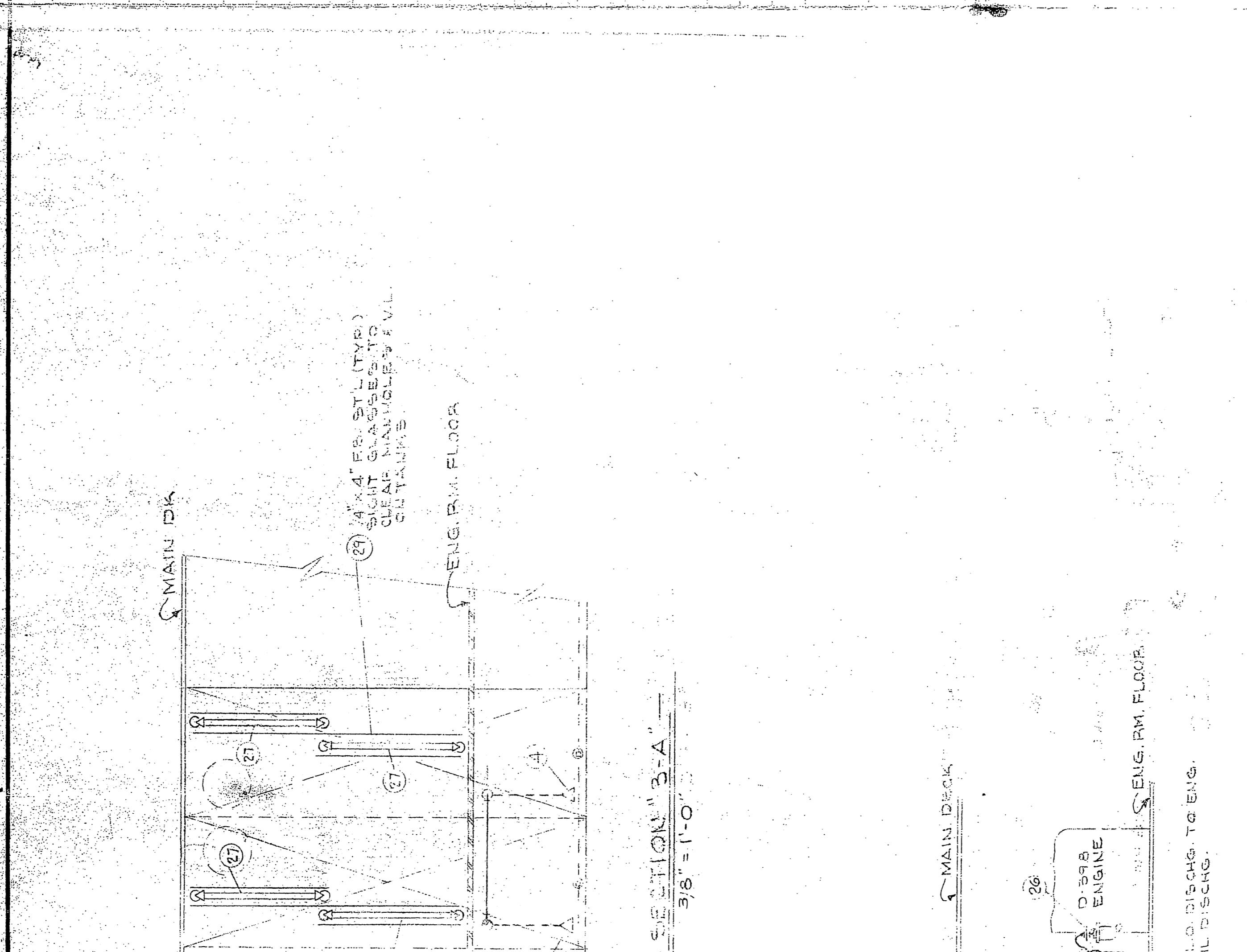


BILL OF MATERIAL

QTY	SIZE	DESCRIPTION	ITEM NO.	VERSION
1	1"	DEMANING PUMP (1/2" x 3/4")	353	353
2	1/2"	PIPE (1/2" x 1/2" x 10')	354	354
3	1/2"	PIPE (1/2" x 1/2" x 10')	355	355
4	1/2"	CONC. RED. BLE. (1/2")	356	356
5	1/2"	CONC. RED. BLE. (1/2")	357	357
6	1/2"	CONC. RED. BLE. (1/2")	358	358
7	1/2"	CONC. RED. BLE. (1/2")	359	359
8	1/2"	CONC. RED. BLE. (1/2")	360	360
9	1/2"	CONC. RED. BLE. (1/2")	361	361
10	1/2"	CONC. RED. BLE. (1/2")	362	362
11	1/2"	CONC. RED. BLE. (1/2")	363	363
12	1/2"	CONC. RED. BLE. (1/2")	364	364
13	1/2"	CONC. RED. BLE. (1/2")	365	365
14	1/2"	CONC. RED. BLE. (1/2")	366	366
15	1/2"	CONC. RED. BLE. (1/2")	367	367
16	1/2"	CONC. RED. BLE. (1/2")	368	368
17	1/2"	CONC. RED. BLE. (1/2")	369	369
18	1/2"	CONC. RED. BLE. (1/2")	370	370
19	1/2"	CONC. RED. BLE. (1/2")	371	371
20	1/2"	CONC. RED. BLE. (1/2")	372	372
21	1/2"	CONC. RED. BLE. (1/2")	373	373
22	1/2"	CONC. RED. BLE. (1/2")	374	374
23	1/2"	CONC. RED. BLE. (1/2")	375	375
24	1/2"	CONC. RED. BLE. (1/2")	376	376
25	1/2"	CONC. RED. BLE. (1/2")	377	377
26	1/2"	CONC. RED. BLE. (1/2")	378	378
27	1/2"	CONC. RED. BLE. (1/2")	379	379
28	1/2"	CONC. RED. BLE. (1/2")	380	380
29	1/2"	CONC. RED. BLE. (1/2")	381	381
30	1/2"	CONC. RED. BLE. (1/2")	382	382
31	1/2"	CONC. RED. BLE. (1/2")	383	383
32	1/2"	CONC. RED. BLE. (1/2")	384	384
33	1/2"	CONC. RED. BLE. (1/2")	385	385
34	1/2"	CONC. RED. BLE. (1/2")	386	386
35	1/2"	CONC. RED. BLE. (1/2")	387	387
36	1/2"	CONC. RED. BLE. (1/2")	388	388
37	1/2"	CONC. RED. BLE. (1/2")	389	389
38	1/2"	CONC. RED. BLE. (1/2")	390	390
39	1/2"	CONC. RED. BLE. (1/2")	391	391
40	1/2"	CONC. RED. BLE. (1/2")	392	392
41	1/2"	CONC. RED. BLE. (1/2")	393	393
42	1/2"	CONC. RED. BLE. (1/2")	394	394
43	1/2"	CONC. RED. BLE. (1/2")	395	395
44	1/2"	CONC. RED. BLE. (1/2")	396	396
45	1/2"	CONC. RED. BLE. (1/2")	397	397
46	1/2"	CONC. RED. BLE. (1/2")	398	398
47	1/2"	CONC. RED. BLE. (1/2")	399	399
48	1/2"	CONC. RED. BLE. (1/2")	400	400
49	1/2"	CONC. RED. BLE. (1/2")	401	401
50	1/2"	CONC. RED. BLE. (1/2")	402	402
51	1/2"	CONC. RED. BLE. (1/2")	403	403
52	1/2"	CONC. RED. BLE. (1/2")	404	404
53	1/2"	CONC. RED. BLE. (1/2")	405	405
54	1/2"	CONC. RED. BLE. (1/2")	406	406
55	1/2"	CONC. RED. BLE. (1/2")	407	407
56	1/2"	CONC. RED. BLE. (1/2")	408	408
57	1/2"	CONC. RED. BLE. (1/2")	409	409
58	1/2"	CONC. RED. BLE. (1/2")	410	410
59	1/2"	CONC. RED. BLE. (1/2")	411	411
60	1/2"	CONC. RED. BLE. (1/2")	412	412
61	1/2"	CONC. RED. BLE. (1/2")	413	413
62	1/2"	CONC. RED. BLE. (1/2")	414	414
63	1/2"	CONC. RED. BLE. (1/2")	415	415
64	1/2"	CONC. RED. BLE. (1/2")	416	416
65	1/2"	CONC. RED. BLE. (1/2")	417	417
66	1/2"	CONC. RED. BLE. (1/2")	418	418
67	1/2"	CONC. RED. BLE. (1/2")	419	419
68	1/2"	CONC. RED. BLE. (1/2")	420	420
69	1/2"	CONC. RED. BLE. (1/2")	421	421
70	1/2"	CONC. RED. BLE. (1/2")	422	422
71	1/2"	CONC. RED. BLE. (1/2")	423	423
72	1/2"	CONC. RED. BLE. (1/2")	424	424
73	1/2"	CONC. RED. BLE. (1/2")	425	425
74	1/2"	CONC. RED. BLE. (1/2")	426	426
75	1/2"	CONC. RED. BLE. (1/2")	427	427
76	1/2"	CONC. RED. BLE. (1/2")	428	428
77	1/2"	CONC. RED. BLE. (1/2")	429	429
78	1/2"	CONC. RED. BLE. (1/2")	430	430
79	1/2"	CONC. RED. BLE. (1/2")	431	431
80	1/2"	CONC. RED. BLE. (1/2")	432	432
81	1/2"	CONC. RED. BLE. (1/2")	433	433
82	1/2"	CONC. RED. BLE. (1/2")	434	434
83	1/2"	CONC. RED. BLE. (1/2")	435	435
84	1/2"	CONC. RED. BLE. (1/2")	436	436
85	1/2"	CONC. RED. BLE. (1/2")	437	437
86	1/2"	CONC. RED. BLE. (1/2")	438	438
87	1/2"	CONC. RED. BLE. (1/2")	439	439
88	1/2"	CONC. RED. BLE. (1/2")	440	440
89	1/2"	CONC. RED. BLE. (1/2")	441	441
90	1/2"	CONC. RED. BLE. (1/2")	442	442
91	1/2"	CONC. RED. BLE. (1/2")	443	443
92	1/2"	CONC. RED. BLE. (1/2")	444	444
93	1/2"	CONC. RED. BLE. (1/2")	445	445
94	1/2"	CONC. RED. BLE. (1/2")	446	446
95	1/2"	CONC. RED. BLE. (1/2")	447	447
96	1/2"	CONC. RED. BLE. (1/2")	448	448
97	1/2"	CONC. RED. BLE. (1/2")	449	449
98	1/2"	CONC. RED. BLE. (1/2")	450	450
99	1/2"	CONC. RED. BLE. (1/2")	451	451
100	1/2"	CONC. RED. BLE. (1/2")	452	452



REVISIONS

NO.	DATE	DESCRIPTION	BY	APP.
1	1/1/55	ISSUED FOR CONSTRUCTION
2
3
4
5

APPROVALS

USPS: _____

USCC: _____

FCC: _____

U.S. NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D.C. 20380

OCEANOGRAPHIC RESEARCH SHIP
AGOR (UTILITY) CLASS

HALTER MARINE SERVICES, INC. 00045
P.O. BOX 29285 NEW ORLEANS, LA. 70189

LUBE OIL PIPING

SCALE: AS SHOWN DATE: 3/1/55
DRAWN BY: ESTEOR/CID BY: GAVES
HALTER: 375 376 HALTER: 2187-38
HULL NO.: 375 376 JOB NO.: 2187-38
NAVSHIPS NO.: ASOC 21-211-091 REV. 2

GENERAL NOTES

1. ALL PIPING SHALL BE DIRECT AS POSITIVE.
2. ALL SCRD FITTINGS ARE TO BE 150 M.I. PL.
3. ALL VALVES SHALL BE 150 M.I. PL.
4. VALVE TAGS SHALL BE IDENTIFIED BY THE USER OF TAGS.
5. ALL PIPE SHALL BE ADEQUATELY PROTECTED.
6. PIPE SHALL BE PROPERLY CLEANED AFTER INSTALLATION.
7. SEE DWG. P-2 FOR LUBE OIL TANK VE.
8. ALL PIPING AND VALVES SHALL BE MARKED WITH NATIONAL COLOR CODE.
9. ALL PIPING SHALL BE MARKED WITH NATIONAL COLOR CODE & SHALL INDICATE DIRECTION OF FLOW.