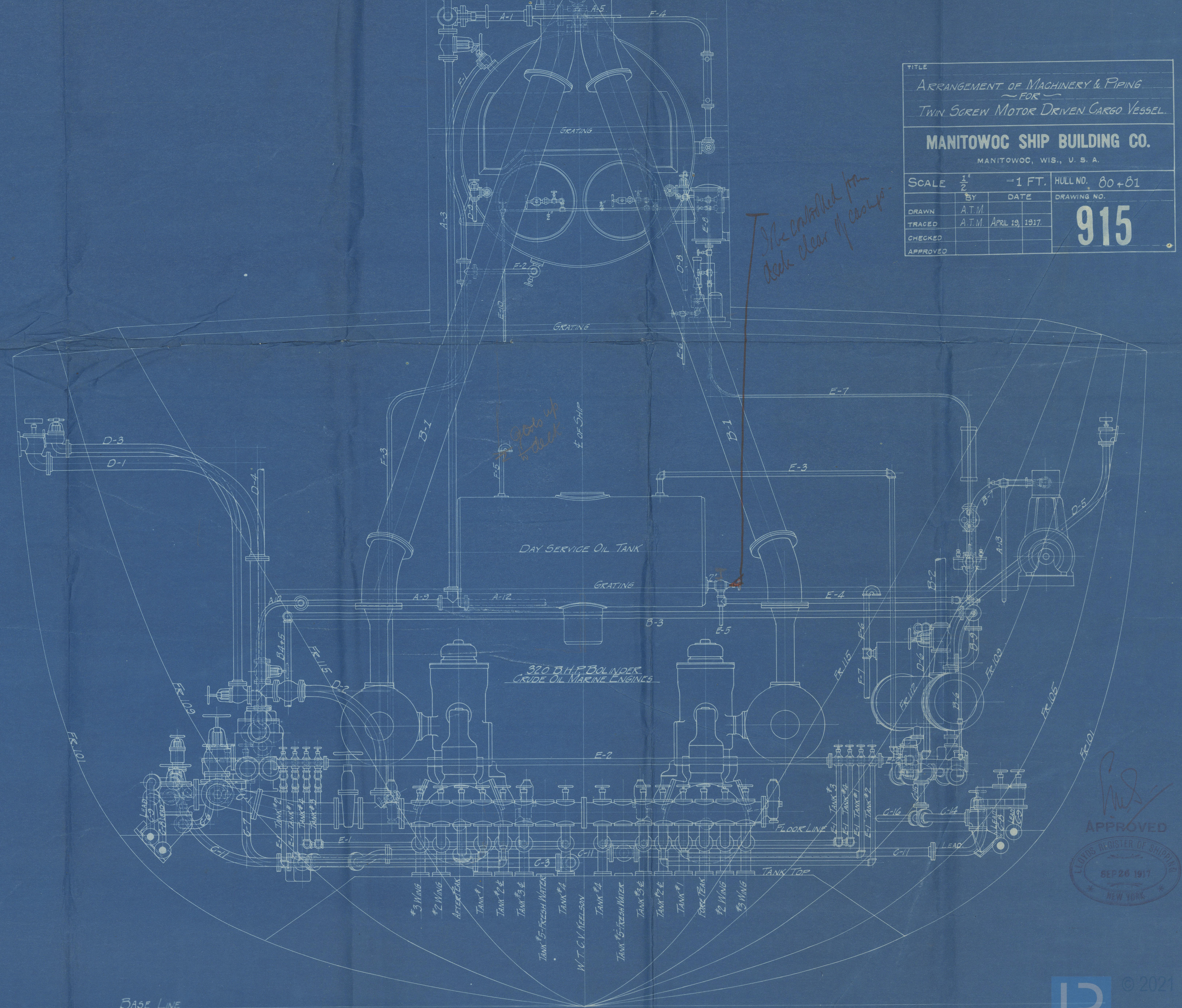
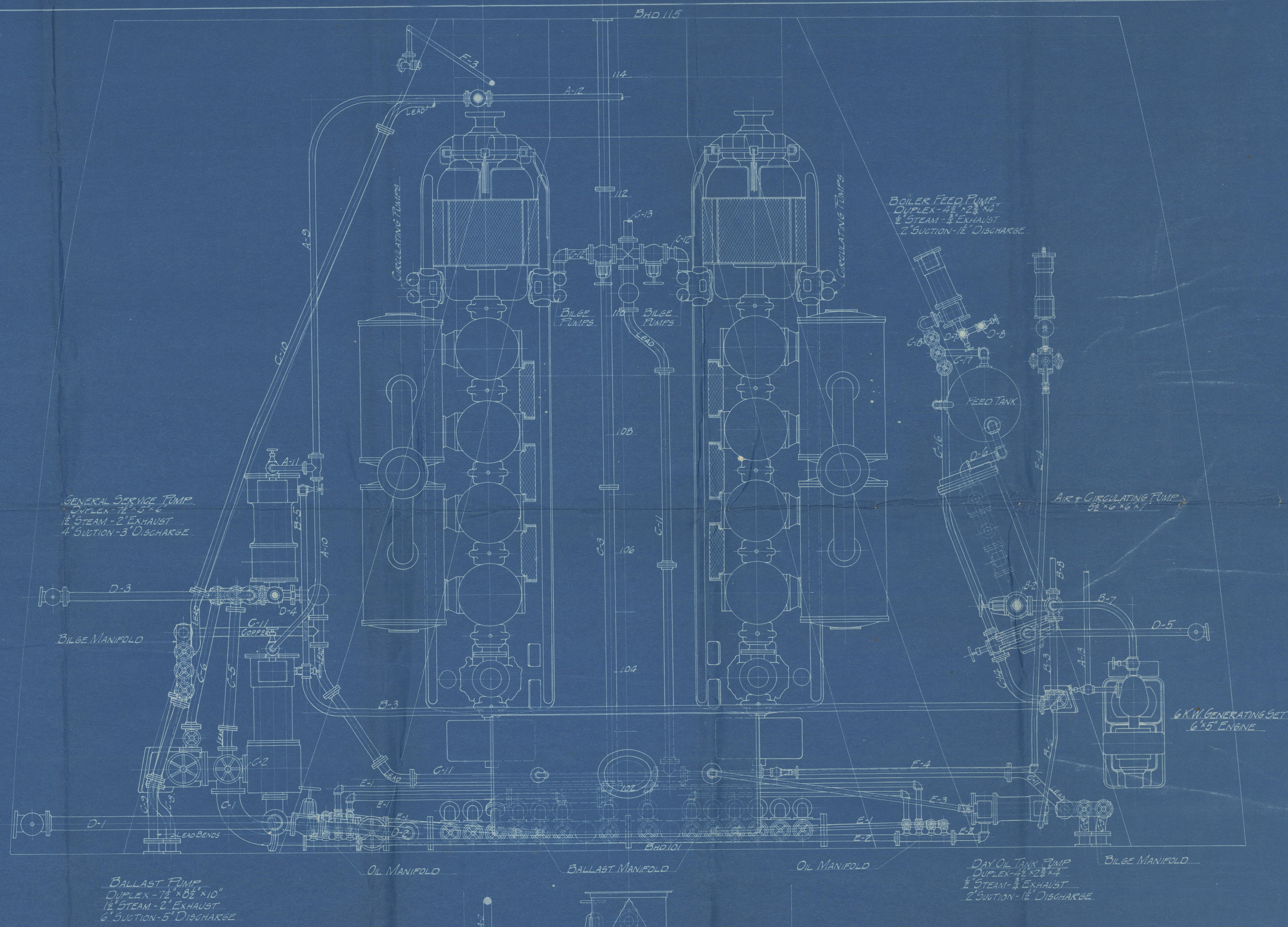
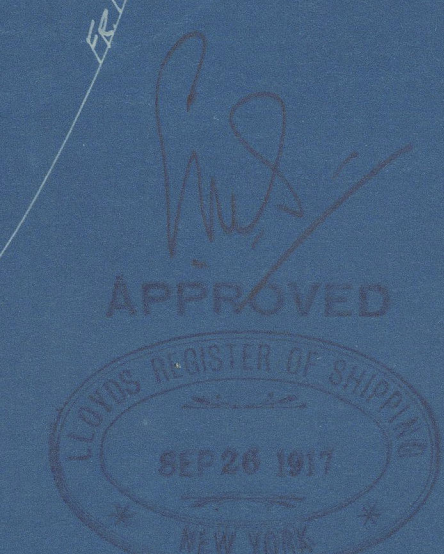


Mk.	Size	Wt.	Mat.	Description
A-1	3"			EXHAUST MAIN STEAM
A-2	3"			STEAM FORWARD TO WINGLES
A-3	2 1/2"			TO ENGINE ROOM
A-4	1 1/2"			TO STEERING ENGINE
A-5	1 1/2"			TO WHISTLE, FUEL OIL HEATER + PUMP
A-6	1 1/2"			TO HEATING SYSTEM - REDUCED TO 30"
A-7	1 1/2"			TO FUEL OIL HEATER + PUMP
A-8	1 1/2"			TO PUMP
A-9	2"			TO BALLAST + GENERAL SERVICE PUMPS
A-10	1 1/2"			TO PUMP
A-11	1 1/2"			TO GENERAL SERVICE PUMP
A-12	2"			TO BOILER FEED PUMP, AIR + CIRC. PUMPS,
A-13	1 1/2"			GENERATOR, + DAY OIL TANK PUMP
A-14	1 1/2"			TO GENERATOR
B-1	4" x 2"			W.I. MAIN EXHAUSTS FROM MOTORS
B-2	4"			2nd LWS. EXHAUST FROM WINGLES
B-3	2 1/2"			BALLAST, GENERAL SERVICE + OIL PUMPS
B-4	2"			PUMP
B-5	2"			GENERAL SERVICE PUMP
B-6	2"			DAY OIL TANK PUMP
B-7	2"			GENERATOR
B-8	1 1/2"			BOILER FEED, FUEL OIL + AIR + CIRC. PUMPS
B-9	3"			C.I. TO CONDENSER
B-10	3"			THRU SAFETY VALVE ESCAPE PIPE
C-1	8"			C.I. BALLAST MANIFOLD CONNECTION TO SEA + PUMP
C-2	6"			C.I. SUCTION - BALLAST PUMP FROM SEA + MANIFOLD
C-3	3"			C.I. MANIFOLD FROM AFTER PEAK
C-4	3"			C.I. GENERAL SERVICE PUMP FROM MANIFOLD
C-5	3"			C.I. GENERAL SERVICE PUMP FROM BALLAST TANKS
C-6	3"			C.I. PUMP CONNECTION TO SEA
C-7	3"			C.I. DILGES
C-8	3"			C.I. DILGE MANIFOLD FROM HOLD #1 - F + S
C-9	3"			C.I. FROM DILGE MANIFOLD
C-10	3"			C.I. FROM DILGE MANIFOLD
C-11	3"			C.I. FROM DILGE MANIFOLD
C-12	3"			C.I. FROM DILGE MANIFOLD
C-13	3"			C.I. FROM DILGE MANIFOLD
C-14	3"			C.I. FROM DILGE MANIFOLD
C-15	3"			C.I. FROM DILGE MANIFOLD
C-16	3"			C.I. FROM DILGE MANIFOLD
C-17	3"			C.I. FROM DILGE MANIFOLD
C-18	3"			C.I. FROM DILGE MANIFOLD
C-19	3"			C.I. FROM DILGE MANIFOLD
C-20	3"			C.I. FROM DILGE MANIFOLD
C-21	3"			C.I. FROM DILGE MANIFOLD
C-22	3"			C.I. FROM DILGE MANIFOLD
C-23	3"			C.I. FROM DILGE MANIFOLD
C-24	3"			C.I. FROM DILGE MANIFOLD
C-25	3"			C.I. FROM DILGE MANIFOLD
C-26	3"			C.I. FROM DILGE MANIFOLD
C-27	3"			C.I. FROM DILGE MANIFOLD
C-28	3"			C.I. FROM DILGE MANIFOLD
C-29	3"			C.I. FROM DILGE MANIFOLD
C-30	3"			C.I. FROM DILGE MANIFOLD
C-31	3"			C.I. FROM DILGE MANIFOLD
C-32	3"			C.I. FROM DILGE MANIFOLD
C-33	3"			C.I. FROM DILGE MANIFOLD
C-34	3"			C.I. FROM DILGE MANIFOLD
C-35	3"			C.I. FROM DILGE MANIFOLD
C-36	3"			C.I. FROM DILGE MANIFOLD
C-37	3"			C.I. FROM DILGE MANIFOLD
C-38	3"			C.I. FROM DILGE MANIFOLD
C-39	3"			C.I. FROM DILGE MANIFOLD
C-40	3"			C.I. FROM DILGE MANIFOLD
C-41	3"			C.I. FROM DILGE MANIFOLD
C-42	3"			C.I. FROM DILGE MANIFOLD
C-43	3"			C.I. FROM DILGE MANIFOLD
C-44	3"			C.I. FROM DILGE MANIFOLD
C-45	3"			C.I. FROM DILGE MANIFOLD
C-46	3"			C.I. FROM DILGE MANIFOLD
C-47	3"			C.I. FROM DILGE MANIFOLD
C-48	3"			C.I. FROM DILGE MANIFOLD
C-49	3"			C.I. FROM DILGE MANIFOLD
C-50	3"			C.I. FROM DILGE MANIFOLD
C-51	3"			C.I. FROM DILGE MANIFOLD
C-52	3"			C.I. FROM DILGE MANIFOLD
C-53	3"			C.I. FROM DILGE MANIFOLD
C-54	3"			C.I. FROM DILGE MANIFOLD
C-55	3"			C.I. FROM DILGE MANIFOLD
C-56	3"			C.I. FROM DILGE MANIFOLD
C-57	3"			C.I. FROM DILGE MANIFOLD
C-58	3"			C.I. FROM DILGE MANIFOLD
C-59	3"			C.I. FROM DILGE MANIFOLD
C-60	3"			C.I. FROM DILGE MANIFOLD
C-61	3"			C.I. FROM DILGE MANIFOLD
C-62	3"			C.I. FROM DILGE MANIFOLD
C-63	3"			C.I. FROM DILGE MANIFOLD
C-64	3"			C.I. FROM DILGE MANIFOLD
C-65	3"			C.I. FROM DILGE MANIFOLD
C-66	3"			C.I. FROM DILGE MANIFOLD
C-67	3"			C.I. FROM DILGE MANIFOLD
C-68	3"			C.I. FROM DILGE MANIFOLD
C-69	3"			C.I. FROM DILGE MANIFOLD
C-70	3"			C.I. FROM DILGE MANIFOLD
C-71	3"			C.I. FROM DILGE MANIFOLD
C-72	3"			C.I. FROM DILGE MANIFOLD
C-73	3"			C.I. FROM DILGE MANIFOLD
C-74	3"			C.I. FROM DILGE MANIFOLD
C-75	3"			C.I. FROM DILGE MANIFOLD
C-76	3"			C.I. FROM DILGE MANIFOLD
C-77	3"			C.I. FROM DILGE MANIFOLD
C-78	3"			C.I. FROM DILGE MANIFOLD
C-79	3"			C.I. FROM DILGE MANIFOLD
C-80	3"			C.I. FROM DILGE MANIFOLD
C-81	3"			C.I. FROM DILGE MANIFOLD
C-82	3"			C.I. FROM DILGE MANIFOLD
C-83	3"			C.I. FROM DILGE MANIFOLD
C-84	3"			C.I. FROM DILGE MANIFOLD
C-85	3"			C.I. FROM DILGE MANIFOLD
C-86	3"			C.I. FROM DILGE MANIFOLD
C-87	3"			C.I. FROM DILGE MANIFOLD
C-88	3"			C.I. FROM DILGE MANIFOLD
C-89	3"			C.I. FROM DILGE MANIFOLD
C-90	3"			C.I. FROM DILGE MANIFOLD
C-91	3"			C.I. FROM DILGE MANIFOLD
C-92	3"			C.I. FROM DILGE MANIFOLD
C-93	3"			C.I. FROM DILGE MANIFOLD
C-94	3"			C.I. FROM DILGE MANIFOLD
C-95	3"			C.I. FROM DILGE MANIFOLD
C-96	3"			C.I. FROM DILGE MANIFOLD
C-97	3"			C.I. FROM DILGE MANIFOLD
C-98	3"			C.I. FROM DILGE MANIFOLD
C-99	3"			C.I. FROM DILGE MANIFOLD
C-100	3"			C.I. FROM DILGE MANIFOLD
D-1	5"			BALLAST PUMP OVERBOARD
D-2	5"			BALLAST PUMP OVERBOARD
D-3	5"			BALLAST PUMP OVERBOARD
D-4	5"			BALLAST PUMP OVERBOARD
D-5	5"			BALLAST PUMP OVERBOARD
D-6	5"			BALLAST PUMP OVERBOARD
D-7	5"			BALLAST PUMP OVERBOARD
D-8	5"			BALLAST PUMP OVERBOARD
D-9	5"			BALLAST PUMP OVERBOARD
D-10	5"			BALLAST PUMP OVERBOARD
D-11	5"			BALLAST PUMP OVERBOARD
D-12	5"			BALLAST PUMP OVERBOARD
D-13	5"			BALLAST PUMP OVERBOARD
D-14	5"			BALLAST PUMP OVERBOARD
D-15	5"			BALLAST PUMP OVERBOARD
D-16	5"			BALLAST PUMP OVERBOARD
D-17	5"			BALLAST PUMP OVERBOARD
D-18	5"			BALLAST PUMP OVERBOARD
D-19	5"			BALLAST PUMP OVERBOARD
D-20	5"			BALLAST PUMP OVERBOARD
D-21	5"			BALLAST PUMP OVERBOARD
D-22	5"			BALLAST PUMP OVERBOARD
D-23	5"			BALLAST PUMP OVERBOARD
D-24	5"			BALLAST PUMP OVERBOARD
D-25	5"			BALLAST PUMP OVERBOARD
D-26	5"			BALLAST PUMP OVERBOARD
D-27	5"			BALLAST PUMP OVERBOARD
D-28	5"			BALLAST PUMP OVERBOARD
D-29	5"			BALLAST PUMP OVERBOARD
D-30	5"			BALLAST PUMP OVERBOARD
D-31	5"			BALLAST PUMP OVERBOARD
D-32	5"			BALLAST PUMP OVERBOARD
D-33	5"			BALLAST PUMP OVERBOARD
D-34	5"			BALLAST PUMP OVERBOARD
D-35	5"			BALLAST PUMP OVERBOARD
D-36	5"			BALLAST PUMP OVERBOARD
D-37	5"			BALLAST PUMP OVERBOARD
D-38	5"			BALLAST PUMP OVERBOARD
D-39	5"			BALLAST PUMP OVERBOARD
D-40	5"			BALLAST PUMP OVERBOARD
D-41	5"			BALLAST PUMP OVERBOARD
D-42	5"			BALLAST PUMP OVERBOARD
D-43	5"			BALLAST PUMP OVERBOARD
D-44	5"			BALLAST PUMP OVERBOARD
D-45	5"			BALLAST PUMP OVERBOARD
D-46	5"			BALLAST PUMP OVERBOARD
D-47	5"			BALLAST PUMP OVERBOARD
D-48	5"			BALLAST PUMP OVERBOARD
D-49	5"			BALLAST PUMP OVERBOARD
D-50	5"			BALLAST PUMP OVERBOARD
D-51	5"			BALLAST PUMP OVERBOARD
D-52	5"			BALLAST PUMP OVERBOARD
D-53	5"			BALLAST PUMP OVERBOARD
D-54	5"			BALLAST PUMP OVERBOARD
D-55	5"			BALLAST PUMP OVERBOARD
D-56	5"			BALLAST PUMP OVERBOARD
D-57	5"			BALLAST PUMP OVERBOARD
D-58	5"			BALLAST PUMP OVERBOARD
D-59	5"			BALLAST PUMP OVERBOARD
D-60	5"			BALLAST PUMP OVERBOARD
D-61	5"			BALLAST PUMP OVERBOARD
D-62	5"			BALLAST PUMP OVERBOARD
D-63	5"			BALLAST PUMP OVERBOARD
D-64	5"			BALLAST PUMP OVERBOARD
D-65	5"			BALLAST PUMP OVERBOARD
D-66	5"			BALLAST PUMP OVERBOARD
D-67	5"			BALLAST PUMP OVERBOARD
D-68	5"			BALLAST PUMP OVERBOARD
D-69	5"			BALLAST PUMP OVERBOARD
D-70	5"			BALLAST PUMP OVERBOARD
D-71	5"			BALLAST PUMP OVERBOARD
D-72	5"			BALLAST PUMP OVERBOARD
D-73	5"			BALLAST PUMP OVERBOARD
D-74	5"			BALLAST PUMP OVERBOARD
D-75	5"			BALLAST PUMP OVERBOARD
D-76	5"			BALLAST PUMP OVERBOARD
D-77	5"			BALLAST PUMP OVERBOARD
D-78	5"			BALLAST PUMP OVERBOARD
D-79	5"			BALLAST PUMP OVERBOARD
D-80	5"			BALLAST PUMP OVERBOARD
D-81	5"			BALLAST PUMP OVERBOARD
D-82	5"			BALLAST PUMP OVERBOARD
D-83	5"			BALLAST PUMP OVERBOARD
D-84	5"			BALLAST PUMP OVERBOARD
D-85	5"			BALLAST PUMP OVERBOARD
D-86	5"			BALLAST PUMP OVERBOARD
D-87	5"			BALLAST PUMP OVERBOARD
D-88	5"			BALLAST PUMP OVERBOARD
D-89	5"			BALLAST PUMP OVERBOARD
D-90	5"			BALLAST PUMP OVERBOARD
D-91	5"			BALLAST PUMP OVERBOARD
D-92	5"			BALLAST PUMP OVERBOARD
D-93	5"			BALLAST PUMP OVERBOARD
D-94	5"			BALLAST PUMP OVERBOARD
D-95	5"			BALLAST PUMP OVERBOARD
D-96	5"			BALLAST PUMP OVERBOARD
D-97	5"			BALLAST PUMP OVERBOARD
D-98	5"			BALLAST PUMP OVERBOARD
D-99	5"			BALLAST PUMP OVERBOARD
D-100	5"			BALLAST PUMP OVERBOARD
E-1	1 1/2"			2nd LWS. OIL MANIFOLD SUCTIONS FROM TANKS
E-2	2"			DAY OIL TANK PUMP SUCTION FROM MANIFOLD
E-3	1 1/2"			DISCHARGE TO DAY SERVICE TANK
E-4	1 1/2"			FUEL OIL PUMP SUCTION FROM
E-5	1 1/2"			ENGINE
E-6	1 1/2"			STARTER
E-7	1 1/2"			FUEL TANK DISCHARGE TO HEATER
E-8	1 1/2"			FUEL OIL TO BURNERS
E-9	1 1/2"			STARTER DISCHARGE TO BURNERS
E-10	1 1/2"			RETURN TO SUCTION LINE
F-1	1 1/2"			2nd LWS. SURFACE BLOWOFF
F-2	1 1/2"			BOTTOM
F-3	1 1/2"			BLOWOFF DISCHARGE OVERBOARD
F-4	1 1/2"			WATER COLUMN
F-5	1 1/2"			SERVICE TANK VENT
F-6	1 1/2"			FEED
F-7	1 1/2"			OVERFLOW TO FRESH WATER TANKS



TITLE			
ARRANGEMENT OF MACHINERY & PIPING			
FOR			
TWIN SURE MOTOR DRIVEN CARGO VESSEL			
MANITOWOC SHIP BUILDING CO.			
MANITOWOC, WIS., U.S.A.			
SCALE	1/4"	1 FT.	HULL NO. 80+81
DRAWN	BY	DATE	DRAWING NO.
TRACED	ATM	APR 19, 1917	915
CHECKED			
APPROVED			



Manitowoc S. B. Co.

Bills 80 and 81.

General Arrangement
of Machinery.

H. R. McCLELLAND

"Ada" *for Surveyor*

Chicago

Oil Fuel Pumping
Augt.

#51

REMAIN
RECEIVED
JUN 1972
LONDON



© 2021

Lloyd's Register
Foundation

W521-0219