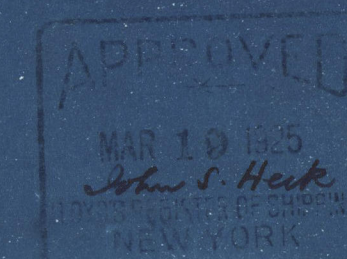


SUPERHEATED H.S. - TUBES	108 #
WATER HEAT. SURFACE - TUBES	228 #
" " - TOTAL	282 #
TUBE AREA	1.9 #
FURNACE VOLUME	42.5 CU. FT.
H.S. ÷ E.G.A.	22.4
EQUIVALENT GRATE AREA	12 #
STEAM PRESSURE	100 #
WATER TEST PRESSURE	200 #
TOTAL EVAP. = 1000 #/HR.	FIT 2-2"
AREA SAFETY VALVE = 115	2074 x 1000 = 1.8 AREA = 6.28"

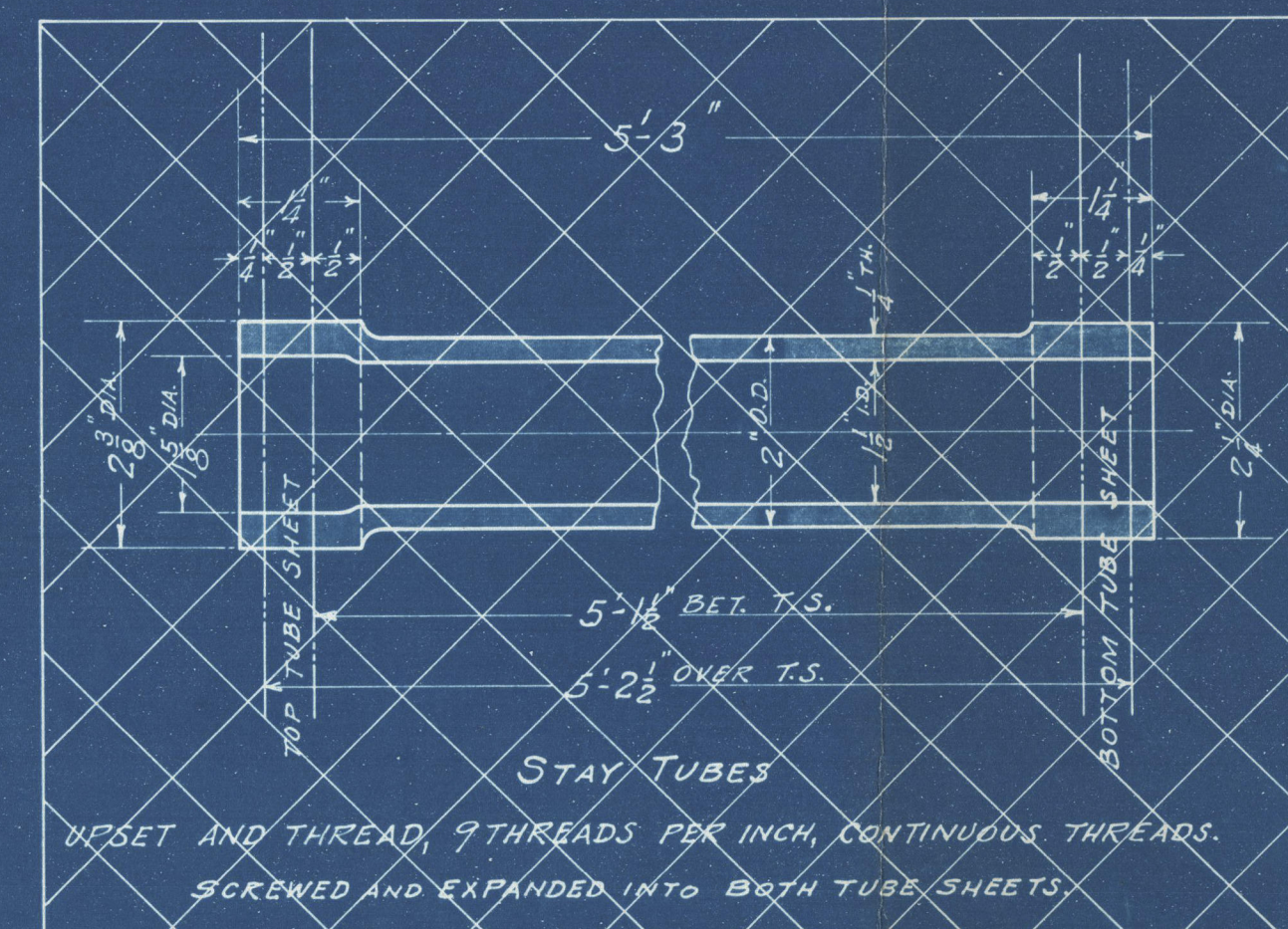
PART	MATERIAL	MAX. T.S. LBS./IN.	MAX. T.S. LBS./IN.	REQUIREMENTS
SHELL PLATE	O.H. STEEL	60000	70000	U.S., A.B.S., LLOYDS.
FLANGE AND FIRE BOX	"	58240	65000	A.B.S., LLOYDS.
TUBES	LAP WELDED STEEL	"	"	MILL TO FURNISH CERTIFICATE TO U.S.
RIVETS	MILD STEEL	58240	65000	A.B.S., LLOYDS.
SCREW STAYS	O.H. STEEL	58240	67200	U.S., A.B.S., LLOYDS.
ANGLE	MEDIUM STEEL	"	"	"

1	ITEM	NAME OF PART	BILL OF MATERIAL FOR ONE BOILER.	PAT. NO.	MAT.	SIZE AND REMARKS
1	1	SHELL	60000-70000 T.S.		O.H. STEEL	100 1/2" WIDE X 178 1/2" LONG X 3/8" THICK.
1	2	WRAPPER	58240-65000 T.S.		"	46 1/2" X 152 1/2" X 1/2"
1	3	LOWER T.S.	58240-65000 T.S.		"	"
1	4	UPPER T.S.	58240-65000 T.S.		"	"
1	5	BOTTOM RING			STEEL	3 1/2" x 2 1/2" - 13'-9" LONG.
1	6	FURNACE DOOR RING			STEEL	3 1/2" x 2 1/2" - 5'-0" "
1	7	ANGLE FOR UPTAKE			STEEL	3" x 2 1/2" x 3/8" - 13'-0" LONG.
101	8	ORDINARY TUBES			STEEL	2" O.D. x 11 B.W.G. - 5-3 1/2" LONG.
25	9	STAY TUBES			STEEL	2" O.D. x 8" - 5-3 1/2" "
115	10	SCREW STAYS	58240-67200 T.S.		STEEL	1 1/2" DIA. - 5 1/2" LONG.
81	11	RIVETS - BUTTON HD.			MILD STEEL	3/4" DIA. x 2 1/2" LONG - LONGITUDINAL SEAM.
80	12	"			"	3/4" x 2 1/2" - TOP HEAD SEAM.
80	13	"			"	3/4" x 2 1/2" - BOTTOM SEAM.
18	14	"			"	3/4" x 2" - WRAPPER LAP SEAM.
69	15	"			"	3/4" x 2" - TO TUBE SHEET.
28	16	"			"	3/4" x 6" - FURN. DOOR RING.
16	17	STUDS & NUTS			STEEL	3/4" x 2" - ANGLE TO TOP HEAD.
11	18	HANDHOLE COVER & DOG COMPLETE	E2-675	1-5		3" x 5" HANDHOLE. GRIND TO FIT.
11	19	"		6	WIRE INSERTED ASBESTOS	3" x 5" "
1	20	PIPE PLUG			BRASS	2" PIPE TAP.
2	21	FUSIBLE PLUG			"	1/2" INSIDE TYPE SIMILAR TO CRANE #751

CONT. V-645 FOR "E.T. BEDFORD" CLASS OF STANDARD OIL CO. BOATS
CONVERSION TO DIESEL POWER.



NOTES:-
BOILER TO BE CONSTRUCTED TO THE REQUIREMENTS AND
INSPECTION OF THE U.S. STEAMBOAT INSPECTION SERVICE,
THE AMERICAN BUREAU OF SHIPPING, AND LLOYD'S REGISTER.
BOILER FOR USE ON OCEANS.
SAFETY VALVE TO BE SET FOR WORKING PRESSURE OF 100 LBS. PER SQ. IN.
ALL HOLES TO BE DRILLED.
ALL RIVETING TO BE IN ACCORDANCE WITH DR. E5-12.
ALL STAYS TESTED STEEL.
FOR BOILER SCHEDULE SEE DR. E2-774.



PRINTS ISSUED							
DATE	DEPT. NO.	NO.	DATE	DEPT. NO.	NO.	DATE	DEPT. NO.
2-11-25	OWNERS	3					
"	"	1					
3-5-25	U.S.S. I.	3					
"	A.B.S.	3					
"	LLOYD	3					
"	"	1					
3-18-25	U.S.S. I.	3					
"	A.B.S.	3					
"	LLOYD	4					
"	"	1					

CHANGES			
LETTER	DATE	CHANGE	APP.
A	3-18-25	SCREW STAY TUBES CHANGED TO 1" DIA. PLAN	

ORDERS				APPROVALS			
COL. NO.	CONTRACT	DATE	A.B.S. LLOYD'S U.S. OWNER				
1	V-645	2/11/25					

VERTICAL DONKEY BOILER 4'-7" DIA. 9'-2" HIGH. 100 # W.P. 282 # HEATING SURFACE.			
SCALE	1 IN. = 1 FT. DATE 2-18-25		
DR. COX	TR. F.B.C.	CK. L.	A.C.E. C.E.
FEDERAL SHIPBUILDING AND DRY DOCK COMPANY ENGINE DEPARTMENT			
CH. NO.	DR. NO. E 4-689.		

W181-0153