

NOS 427 & S. MIDSHIP SECTION.

SCALE $\frac{1}{2}$ TO ONE FOOT.

LLOYD'S CLASS 100 A. I.

(ONE W. T. BULKHEAD IN AFTER HOLD OMITTED)

COLUMBIA MARU.
MIDSHIP SECTION.
405'-0" x 55'-0" x 32'-0" TO UP D.K.
August 1910

PRINCIPAL DIMENSIONS.			
LENGTH	(L)	405'-0"	
BREADTH	(B)	55'-0"	
DEPTH	(D)	32'-0"	
LOADED DRAUGHT ABOVE BOTTOM OF KEEL		25'-6"	

SCANTLING NUMERALS.			
1 ST LONGITUDINAL NUMERALS	L x D	12 9/16	
2 ND " " " "	L (B+D)	35 23/32	
PROPORTION TO UPPER D ^K	$\frac{1}{2}$	12 1/4	
" " BRIDGE		10 25/32	
FRAMING DEPTH CORRECTED FOR T.S. BRACKETS & BEAM KNEES	(C)	18 63/64	

EQUIPMENT NUMBER.			
L x (B+D)	405 x (55+32)	=	35 23/32
F.C.L. D ^K	4021 x 75 x $\frac{3}{4}$	=	226
BRIDGE	110.00 x 75 x $\frac{3}{4}$	=	619
POOP	44.23 x 75 x $\frac{3}{4}$	=	249
BRIDGE D ^K HOUSE	57.75 x 75 x $\frac{1}{2}$	=	217
CASING	35.75 x 2 x $\frac{1}{2}$	=	36.582

EQUIPMENT.			
3 - POWER ANCHOR STOCKLESS	COLLECTIVE	182 C.WTS	
1 - STREAM (EX. STOCK)		172	
CHAIN CABLE (STUD)	270 FMS	2 1/4 DIA.	
STEEL WIRE ROPE FOR STREAM ANCHOR	90	4 3/8 C.	
TOW LINE STEEL WIRE	120	5" C.	
HAWKERS MANILA	2 - 90	8" C.	
WARPS	2 - 90	7" C.	

FORGING & CASTINGS.			
STEM (ROLLED I.S.)		10' x 22"	
STEM FRAME WITH APERTURE	RUDDER POST	9' x 8"	
	PROPELLER	10' x 8"	

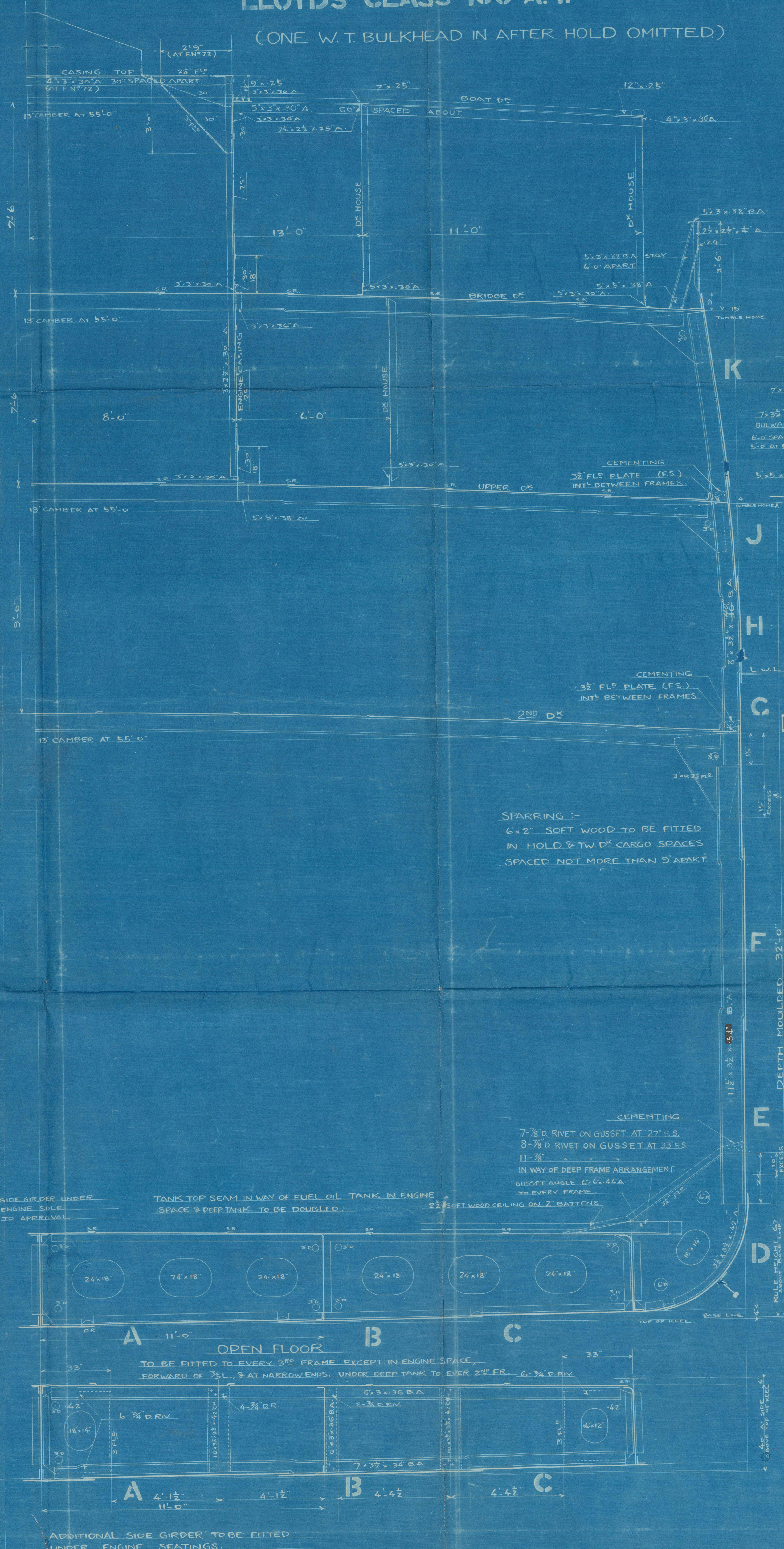
KEEL & SHELL PLATING.			
KEEL PLATE	50 x 80 - .70		
BOTTOM	.66 - 52 3/4 x 48		
SIDE	.66 - 50 3/4 x 46		
BOSS (FURNACE PLATE)	.72		
F.C.L. SIDE PLATE	.42		
BRIDGE	.60		
POOP	.38		
SHEER STRAKE (IN WAY OF LONG BRIDGE)	46	50 x 97 - 50 3/4 x 46	
BELOW STRAKE	66	50 x 75 - 50 3/4 x 46	

RIVETING NOTE.			
END CONNECTION			
KEEL PLATE	FOR 2 L. & AT ENDS		
BOTTOM	LAPPED 4R. LAPPED 3R.		
SIDE	" " " "		
SHEER STRAKE	5R. TO 4 R. 3R.		
STRAKE BELOW SHEER STRAKE	4R. " "		
BRIDGE SIDE PLATING	3R. " "		
F.C.L.	" " 1R.		
POOP	" " " "		
INNER BOTTOM M.L. STRAKE	LAPPED 3R. 2R.		
OTHER	" " 1R.		
MARGIN PLATE	LAPPED 3R. 3R.		
CENTRE GIRDER PLATE	" " 1R.		
POOP D ^K STRINGER	" " 2R.		
PLATE	" " 3R.		
BRIDGE D ^K STRINGER PLATE	LAPPED 3R. 2R.		
PLATE	" " 1R.		
F.C.L. D ^K STRINGER PLATE	" " 1R.		
PLATE	" " 2R.		
UPPER D ^K STRINGER PLATE	LAPPED 5R. 2R.		
IN WAY OF BRIDGE	" " 2R.		
PLATE	" " 3R & 2R.		
IN WAY OF BRIDGE	" " 2R.		
2 ND D ^K STRINGER PLATE	" " 2R.		
PLATE	" " 1R.		
BOAT D ^K STRINGER PLATE	" " 1R.		
TIE PLATE	" " 1R.		

DOUBLE BOTTOM.			
PLATE	2 L. & TO ENDS	IN ENGINE SPACE	REMARKS
CENTRE GIRDER	44 x 54 - 44	60 x 54	HEIGHT MAINTAINED ABOVE TOP OF KEEL
BOTTOM ANGLE	4 x 4 x 58 - 54 D.A.	4 x 4 x 58 D.A.	
TOP	32 x 32 x 52 - 48 D.A.	32 x 32 x 52 D.A.	
VERT. PLATE	32 x 32 x 42 S.A.	5' x 5' x 42 S.A.	TOP WIDE SIDE 3/4" BROAD IN ENGINE SPACE FOR 3/4" L.B.
PLATE	40 3/4 x 44 WHERE FLD	.40	
SIDE GIRDER	32 x 32 x 42 S.A.	5' x 5' x 42 S.A.	
TOP ANGLE	32 x 32 x 42 S.A.	32 x 32 x 38 S.A.	
BOTTOM	32 x 32 x 42 S.A.	32 x 32 x 38 S.A.	
VERT. PLATE	32 x 32 x 42 S.A.	32 x 32 x 38 S.A.	40" IN PEAKS
SOLID FLOOR	32 x 32 x 42 S.A.	32 x 32 x 42 S.A.	
REV. FRAME	32 x 32 x 42 S.A.	5' x 5' x 42 S.A.	
W.T. FLOOR	32 x 32 x 42 S.A.		
STIFFENER	32 x 32 x 42 S.A.		30" SPACED APART.
INNER M.L. STRAKE	44 x 54 - 44	50 x 52	
OTHER	44 x 54 - 44	50 x 52	
BOTTOM OTHER	44 x 54 - 44	50 x 52	
MARGIN PL.	36 x 54 - 36 x 54	54	30 3/4" x 54" AT AFT END.
OPEN FLOOR	AS PER SKETCH		

BILGE KEEL.			
LENGTH	ABOUT 16 FT. AMIDSHIPS		
FLAT BAR 10' x 10' x 10' x 10'	COPE BAR 2 3/4" SHELL ANGLE 5' x 5' x 42'		
DEPTH OF GIRDER	12"		

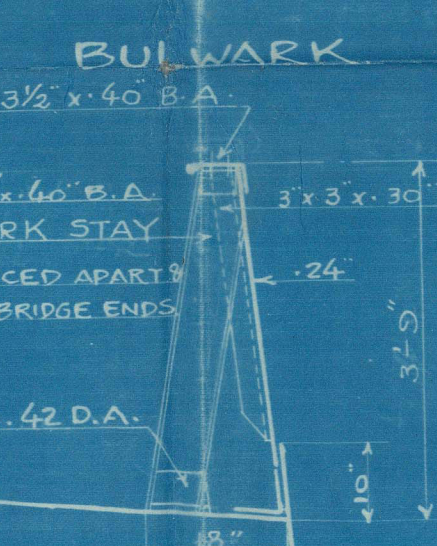
FRAME SPACE.			
24' APART IN BOTH PEAKS.			
27' APART FORWARD OF 3/4" L. & TO COLL. B ^{MD}			
33' ELSEWHERE (RULE SPACING 20')			



DECK HOUSE.			
HOUSE PLATE	UPPER D ^K	BRIDGE D ^K	
D ^K ANGLE	5' x 3' x 30"	5' x 3' x 30"	
TOP	2 1/2" x 1 1/2" x 1/4" A.	2 1/2" x 1 1/2" x 1/4" A.	
STIFFENER	3 PLAT BAR ELECTRO WELDED	3 PLAT BAR ELECTRO WELDED	
SPACE	ABOUT 33" SPACED	ABOUT 36" SPACED	

CASING.			
CASING	1/4" 30 COAMINGS		
COAMING ANGLE	3' x 3' x 30" (AT 10' OF AFT.)		
STIFFENER	1/2" FLD. SPACED 30' APART		

COAMINGS WHERE EXPOSED 30' & COAMINGS 34'



SKETCH OF BEAM KNEE & FRAME CONNECTION.

21' BREADTH FOR 8' DEPTH B.A. BEAM 5 1/2" D.R.V.

27' x 10' x 7 1/2" D.R.V.

24' DEPTH FOR 8' DEPTH B.A. BEAM 5 1/2" D.R.V.

30' x 10' x 10 1/2" D.R.V.

27' x 9' x 9 1/2" D.R.V.

15' DEPTH 5 1/2" D.R.V.

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27' x 9' x 9 1/2" D.R.V.

DECK S.			
STRINGER PL.	F.C.L.	POOP	BRIDGE
ANGLE	32 x 32 x 36 A.	32 x 32 x 36 A.	32 x 32 x 36 A.
DECK PLATE	32 x 32 x 36 A.	32 x 32 x 36 A.	32 x 32 x 36 A.
PLANK	32 x 32 x 36 A.	32 x 32 x 36 A.	32 x 32 x 36 A.
CURTAIN PLATE	32 x 32 x 36 A.	32 x 32 x 36 A.	32 x 32 x 36 A.
BEAM KNEE	32 x 32 x 36 A.	32 x 32 x 36 A.	32 x 32 x 36 A.

DECK S.			
2 ND DECK	UPPER DECK		
STRINGER PLATE	42 x 40 x 36 - 35 x 36	35 x 36 - 30 x 42	130' AT BRIDGE ENDS
ANGLE	32 x 32 x 36 A.	32 x 32 x 36 A.	30' UNDER BRIDGE
ATTACHMENT	PL. 10' x 35' (C.S.)	6' x 6' x 8' A. FOR 1 L. M.	
SH. WAY ANGLE	36 x 34 x 30 - 30	6' x 6' x 8' A.	
DECK PLATE	32 x 32 x 36 A.	32 x 32 x 36 A.	
DECK PLANK	32 x 32 x 36 A.	32 x 32 x 36 A.	
BEAM KNEE	32 x 32 x 36 A.	32 x 32 x 36 A.	

FRAME BRACKET & MARGIN PLATE CONNECTION.			
TANK SIDE BRACKET	IN WAY OF 30' FR. (FR. CING.)	IN WAY OF 27' FR. (FR. CING.)	FOR 15' OF L.
VERT. AND HORIZ. MARGIN PL. TO FR. 107	48	46	46
MARGIN PLATE SHELL ANGLE	32 x 32 x 42 S.A.	32 x 32 x 42 S.A.	5' x 5' x 42 S.A.
NO. OF RIV. ON SIDE FR. 7	32 x 32 x 42 S.A.	32 x 32 x 42 S.A.	32 x 32 x 42 S.A.
NO. OF RIV. ON MARGIN PLATE 7	16 1/2" D.R.V.	12 1/2" D.R.V.	18 1/2" D.R.V.
NO. OF RIV. ON MARGIN PLATE 7	9 1/2" D.R.V.	8 1/2" D.R.V.	12 1/2" D.R.V.

STRENGTHENING OF BOTTOM FORWARD.			
FOR 10' OF 3/4" L. & TO COLLISION BULKHEAD			
PITCH DERIVE IN FRAME TO BE 5 1/2" DIA.			
FRAME ANGLE 5' x 5' x 42' A. FROM MARGIN PL. TO MARGIN PLATE			
INT. ADDITIONAL SIDE GIRDER TO BE FITTED AT 8'0" APART 3 1/2" HEI.			
GIRDER EXTENDING AS FAR AS PRACTICABLE (SEE PROFILE.)			
FLOOR PLATE OR INTERCOSTALS ARE NOT TO BE FLANGED			
SHELL PLATING THREE STRAKES NEXT THE KEEL TO HAVE MIDSHIP THICKNESS .46" MAINTAINED 5'-62" IN WAY OF 27' FS.			

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SCALE $\frac{1}{2}$ TO ONE FOOT.



August 1910

S.S. "COLUMBIA MARU"
NAG. 1600.

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