

MIDSHIP SECTION

S. S. HARMATRIS

SCALE 1/2" = 1 FOOT

TO CLASS 100 A.1. AT LLOYDS SPECIAL SURVEY.

DIMENSIONS :- 428'-0" B.P. - 425'-0" ON L.W.L. - 56'-3" EXTREME x 56'-0" MOULDED
- 28'-9" MOULDED TO UPPER DECK.

LLOYDS NUMERALS
FIRST LONGITUDINAL NUMBER $L \times D = 425'0" \times 28'75" = 12218.75$
SECOND LONGITUDINAL NUMBER $L \times (B+D) = 425'0" \times (56'0" + 28'75") = 36018.75$
PROPORTION 1/2 TO UPPER DECK = $423'58.75" = 14.73$
PROPORTION 1/2 TO BRIDGE DECK = $423'58.75" = 11.23$
D MOULDED DEPTH = 28'75"
 $d = 28.75 - (3.50 + .35 \text{ EXTRA HEIGHT WING BKT}) = 24.90$
ELECTIONS = 81.00%

EQUIPMENT NUMBER
SECOND LONGITUDINAL NUMBER $L \times (B+D) = 36018.75$
BRIDGE 270'00" x 9'0" x 3/4" = 1823.00
FORECASTLE 37'08" x 8'5" x 3/4" = 275.00
SIDEWHEELS & CASING 88'75" x 8'0" x 1/2" = 275.00
BLUON HOUSE 28'0" x 8'0" x 1/2" = 112.00
EQUIPMENT NUMBER = 30723.91

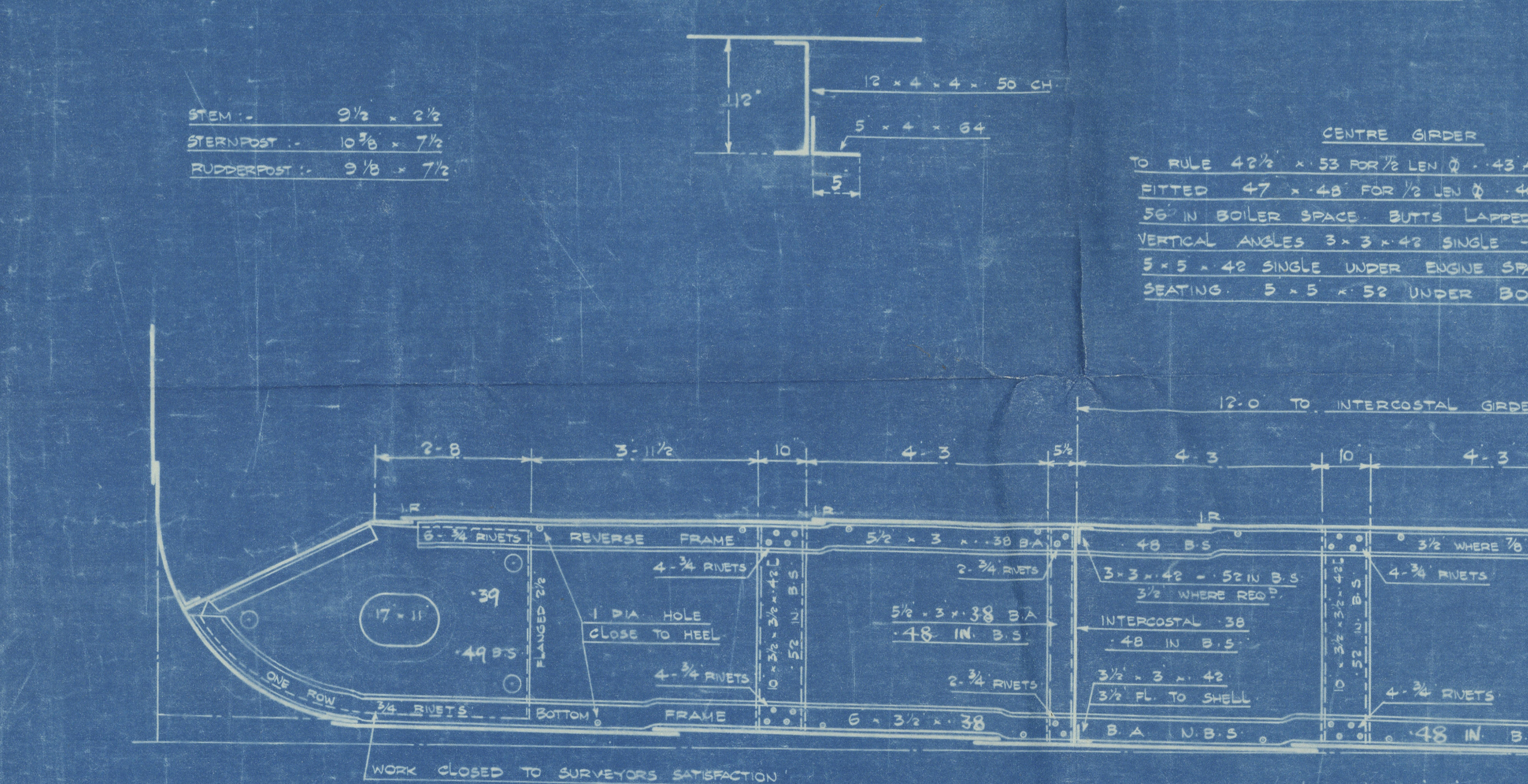
EQUIPMENT
2 BOWER ANCHORS 58 CWT. EACH STOCKLESS
1 BOWER ANCHOR 58 CWT. STOCKLESS
1 STREAM ANCHOR 10 CWT. S.N. STOCK
270 FATHOMS 2 1/2" STUD CHAIN CABLE 720 3/4 CWT.
90 FATHOMS 1 1/2" STREAM CHAIN OR 5 FLEX STEEL WIRE 6x12
120 FATHOMS 1 1/4" - 6" x 24 F.S.W.
2 HANGERS 90 FATHOMS 8 HEMP OR 2 1/2" FLEX STEEL WIRE 6x12
2 WARPS 90 FATHOMS 7 HEMP OR 2 1/2" STEEL WIRE 6x12 14 CAMBER

RIVETING NOTE
RIVETS IN FRAMES TO FLOORS AND CROSS TIE PLATES IN AFT PEAK SPACED 5 DIAM. APART C² TO C²
RIVETS IN FRAMES TO SHELL AT PLAN OF DOUBLE BOTTOM FORWARD 3/4 LEN FOR² SPACED 5/8 DIAM. (TWO COMPLETE ROWS)
RIVETS IN FRAMES TO FLOORS AT PLAN OF DOUBLE BOTTOM FORWARD 3/4 LEN FOR² SPACED 5/8 DIAM. (TWO COMPLETE ROWS)
RIVETS IN 3/4 LEN FRAMES TO SHELL SPACED 7 DIAM. APART, 5/8 DIAM. APART IN WAY OF FORE AND AFT PEAK
TANKS AND DEEP FRAMING FORWARD
RIVETS IN BOTTOM FRAMES TO SHELL AFT 3/4 LEN FORWARD SPACED 7 DIAM. C² TO C²
RIVETS IN 3/4 BUTTS OF OUTSIDE PLATING AND OF DECK STRINGER PLATES SPACED 3/2 DIAM. APART C² TO C²
RIVETS IN 4/4 BUTTS OF OUTSIDE PLATING AND OF DECK STRINGER PLATES SPACED 4 DIAM. APART C² TO C²
RIVETS IN BEAMS OF SHELL PLATING DECK PLATING AND INNER BOTTOM PLATING AS PER TABLE 40
RIVETS IN BUTTS OF DECK PLATING, INNER BOTTOM AND MARGIN PLATING SPACED 4 DIAM. APART C² TO C²
RIVETS IN BEAMS AND BUTTS OF BULKHEAD AND TUNNEL PLATING, MARGIN ANGLES AND WEATHER DECK STRINGER ANGLES,
AND BULKHEAD FRAME TO BULKHEAD SPACED 4 1/2 DIAM. APART C² TO C²
RIVETS IN FLAT KEEL ANGLES, VERTICAL ANGLES CONNECTING FLOORS TO CENTRE GIRDER, AND SHELL PLATE OF
WATERLIGHT BULKHEAD FRAME SPACED 5 DIAM. APART C² TO C²
RIVETS IN FRAMES TO FLOORS AFT 3/4 LEN FORWARD, REVERSE FRAMES TO FLOORS AND INNER BOTTOM PLATING,
VERTICAL ANGLES TO FLOORS AND SIDE GIRDERS, IN BULKHEAD STEIFFERS (EXCEPT PEAK BULKHEADS) AND IN DECK
PLATING TO BEAMS OF EVERY FRAME SPACED 7 DIAM. APART C² TO C²
RIVETS IN SHELL CONNECTING ANGLES 5 IN EACH 27/2 AND 27/4 SPACE, 4 IN EACH 24 SPACE
RIVETS IN CENTRE GIRDER TOP ANGLES 7 DIAM. APART C² TO C² INDU. WATERTIGHT
RIVETS IN CENTRE GIRDER TOP ANGLES 5 DIAM. APART C² TO C² WATERTIGHT

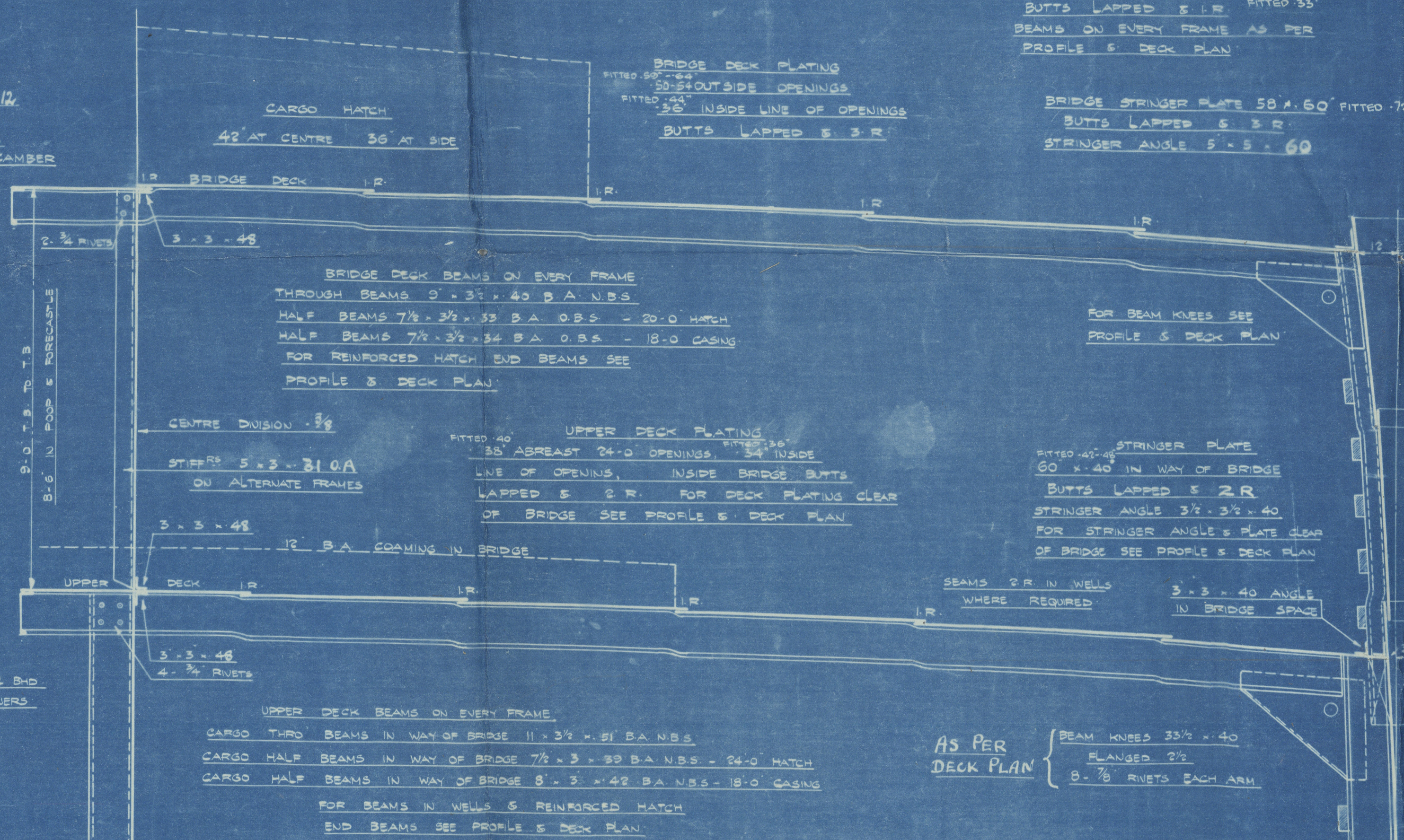
SCANTLINGS AND DETAILS OF CONSTRUCTION NOTED HEREON ARE SUBMITTED ON THE UNDERSTANDING THAT THEY ARE
THE MINIMUM WHICH WILL BE ACCEPTED FOR CLASS. ERRORS AND OMISSIONS EXCEPTED.

TRANSVERSE FRAMING
27 FORWARD 3/4 LENGTH FORWARD, 24 IN PEAKS
MAIN SIDE FRAMES CLEAR OF DEEP FRAMING TUNNEL RECESS 5/8 FORE & AFT PEAK
TANKS 12' x 3 1/2' x 36' B.A. U.S.S. ALL TO UPPER DECK
FRAMES IN ENGINE AND BOILER ROOM TO BE INCREASED 1/4" IN L.W.L. OF LINES FRAME
FRAMES IN BOILER ROOM & PERMANENT BUNKERS (HOLD & TANKS) TO BE INCREASED 1/8"
MAIN SIDE FRAMES IN WAY OF TUNNEL RECESS 10 1/2' x 3 1/2' x 36' B.A. U.S.S. ALL TO UPPER DECK
MAIN SIDE FRAMES IN WAY OF DEEP FRAMING FORWARD 10' ABT. RULE POSITION OF COLLISION
BULKHEAD (SEE PROFILE & DECK PLAN) 12' x 4' x 50' CHANNEL WITH 5' x 4' x 1/4" REVERSE BAR
ALL TO UPPER DECK
PEAK FRAMES 7 1/2' x 3 1/2' x 37' B.A. U.S.S.
BRIDGE TWEEN DECK FRAMES 6' x 3 1/2' x 36' B.A. U.S.S. FITTED ON EVERY FRAME AND
SCARFED TO MAIN FRAMES AT UPPER DECK
POOP TWEEN DECK FRAMES 7' x 3' x 36' B.A. U.S.S. ON ALTERNATE FRAMES SCARFED TO
MAIN FRAMES AT UPPER DECK WITH 6' x 3' x 36' O.A. INTERMEDIATE HANGING FRAMES
FORECASTLE TWEEN DECK FRAMES 7' x 3' x 36' B.A. U.S.S. ON ALTERNATE FRAMES WITH
6' x 3' x 33' INTERMEDIATE FRAMES BOTH SCARFED OR BRACKETED AT UPPER DECK

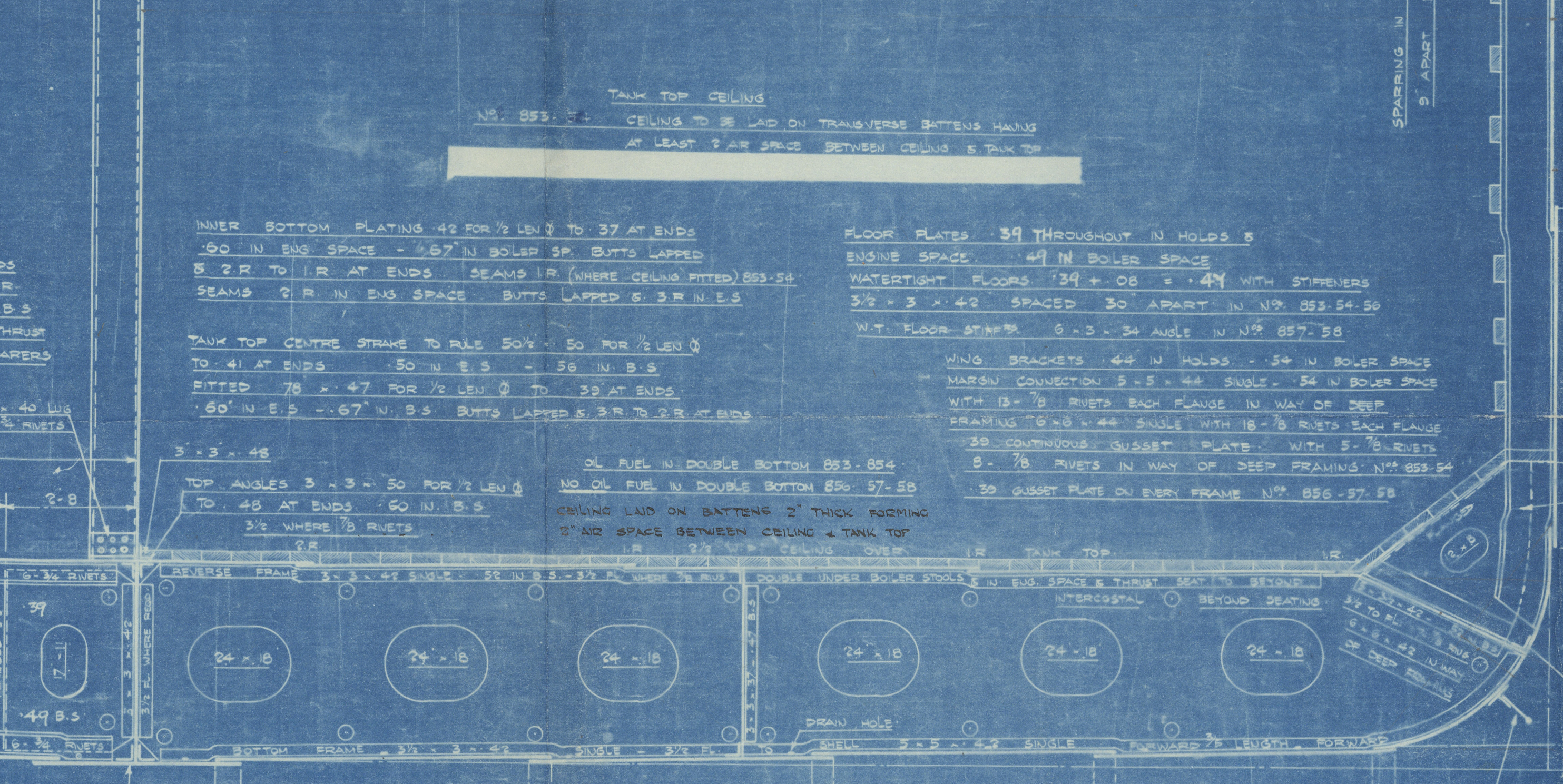
ARRANGEMENT OF DEEP FRAMING
10' x 4' x 4' x 50' CHANNEL TO UPPER DECK WITH 5' x 4' x 1/4" REVERSE BAR AS PER SKETCH BELOW



DISPOSITION OF FLOORS
SOLID FLOORS ON EVERY FRAME IN ENGINE SPACE AND
FORWARD 3/4 LEN FORWARD UNDER BOWER BEARERS IN BULKHEADS
PARTIAL SOLID UNDER TUNNEL RECESS ELSEWHERE SOLID FLOORS
ON EVERY SECOND FRAME, BRACKET FLOORS INTERMEDIATE
NOT EXCEEDING 7/8



OWNERS REQUIREMENTS
TANK TOP PLATING IN ENGINE & BOILER ROOM, ALSO MARGIN PLATES, CENTRE KEELSON
E. TOP & BOTTOM ANGLES OF SAME TO BE 90° IN EXCESS OF LLOYDS
DOUBLE BOTTOM 1 - ALL PLATES & ANGLES IN WAY OF ENGINE & BOILER SPACE
TO BE INCREASED 1/4" IN VESSELS N^o 853-054
DOUBLE BOTTOM 2 - ALL PLATES & ANGLES IN WAY OF ENGINE & BOILER SPACE & THRUST
TO BE INCREASED 1/4" IN VESSELS N^o 853-054
DECK 1 - ALL EXPOSED DECKS & STRINGERS TO BE 90° OVER LLOYDS ALSO
PERMANENT BUNKER DECK FROM FORE END OF CROSS BUNKER HATCH TO AFT END OF BUNKER
CARGO ON UPPER DECK, REMAINDER OF UPPER DECK UNDER BRIDGE DECK TO BE
INCREASED 1/4" UPPER DECK UNDER POOP & FOLE TO BE INCREASED 1/4"
FORECASTLE DECK TO BE INCREASED 1/4"
CENTRE LINE BULKHEAD 1 - 7/8 THICK IN HOLDS & BRIDGE (7/8 IN REAR IN N^o 853-07-8)
SHELL PLATING 1 - FORE END OF FORE BODY IN WAY OF STRINGERS AND
PLATING BEAMS TO BE STRENGTHENED BY EXTRA THICKNESS OF SHELL
PLATING 20% INCREASE OVER LLOYDS
SHAFT TUNNEL 1 - IN WAY OF MATCHES TOP PLATING TO BE NOT LESS THAN 1/2" WITH
STIFFENERS 30' APART
SEE PROFILE & DECK PLAN



DISPOSITION OF FLOORS
SOLID FLOORS ON EVERY FRAME IN ENGINE SPACE AND
FORWARD 3/4 LEN FORWARD UNDER BOWER BEARERS IN BULKHEADS
PARTIAL SOLID UNDER TUNNEL RECESS ELSEWHERE SOLID FLOORS
ON EVERY SECOND FRAME, BRACKET FLOORS INTERMEDIATE
NOT EXCEEDING 7/8

FORECASTLE DECK STRINGER PLATE 35' x 36' FITTED 90°
BUTTS LAPPED 5/8 I.R.
STRINGER ANGLE 3 1/2' x 3 1/2' x 36'
DECK PLATING 1 3/4 UNWEATHERED
BUTTS LAPPED 5/8 I.R. FITTED 90°
BEAMS ON EVERY FRAME AS PER
PROFILE & DECK PLAN

BRIDGE STRINGER PLATE 58' x 60' FITTED 72°
BUTTS LAPPED 5/8 I.R.
STRINGER ANGLE 5' x 5' x 60'

BRIDGE TO RULE 65' FITTED 60° IN
VIEW OF SIDE FRAMES ON DECK FRAME
POOP 38' FORECASTLE 42'
BUTTS LAPPED 5/8 I.R. AT BRIDGE
BUTTS LAPPED 5/8 I.R. AT POOP & FOLE

BRIDGE TO RULE 65' FITTED 60°
POOP 38' FORECASTLE 42'
BUTTS LAPPED 5/8 I.R. AT BRIDGE
BUTTS LAPPED 5/8 I.R. AT POOP & FOLE

2 R. LANDING 5/4 IN BRIDGE
1 R. AT POOP & FOLE

50' x 104' TO RULE FITTED 60° x 95' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' IN WAY OF BRIDGE
BUTTS LAPPED 5/8 I.R. FOR 1/2 LEN 4 R
TO 3 R AT ENDS 3 R IN BRIDGE
FOR THIS STRAKE CLEAR OF BRIDGE
SPECIAL PLAN TO BE SUBMITTED

2 R. LANDING 5/4 IN BRIDGE
2 R. 0 WHERE REQ^d

50' x 104' TO RULE FITTED 60° x 76' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' IN WAY OF BRIDGE
BUTTS LAPPED 5/8 I.R. FOR 1/2 LEN 4 R
TO 3 R AT ENDS 3 R IN BRIDGE
FOR THIS STRAKE CLEAR OF BRIDGE
SPECIAL PLAN TO BE SUBMITTED

2 R. LANDING 5/4

80' x 60' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' FOR END
BUTTS LAPPED 5/8 I.R. THROUGHOUT

2 R. LANDING 5/4

80' x 60' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' FOR END
BUTTS LAPPED 5/8 I.R. THROUGHOUT

2 R. LANDING 5/4

75' x 61' FOR 1/2 LEN 0'
TO 40' AT ENDS 1/2 LEN 0' FOR END
BUTTS LAPPED 5/8 I.R.

MARGIN SHELL ANGLE
2 1/2' x 3 1/2' x 50' FORE & AFT

MARGIN PLATE TO RULE 35' x 50' - 58' IN B.S.
FITTED ABOUT 44' x 50' - 58' IN B.S.
BUTTS LAPPED 5/8 I.R. THROUGHOUT

BASE KEEL 5' x 2 1/2' x 60' IS BAR
WITH 1/2' x 44' BULB PLATE FOR
ABOUT 180' 0' ANSHIPS

BRIDGE TO RULE 65' FITTED 60° IN
VIEW OF SIDE FRAMES ON DECK FRAME
POOP 38' FORECASTLE 42'
BUTTS LAPPED 5/8 I.R. AT BRIDGE
BUTTS LAPPED 5/8 I.R. AT POOP & FOLE

BRIDGE STRINGER PLATE 58' x 60' FITTED 72°
BUTTS LAPPED 5/8 I.R.
STRINGER ANGLE 5' x 5' x 60'

BRIDGE TO RULE 65' FITTED 60° IN
VIEW OF SIDE FRAMES ON DECK FRAME
POOP 38' FORECASTLE 42'
BUTTS LAPPED 5/8 I.R. AT BRIDGE
BUTTS LAPPED 5/8 I.R. AT POOP & FOLE

BRIDGE TO RULE 65' FITTED 60°
POOP 38' FORECASTLE 42'
BUTTS LAPPED 5/8 I.R. AT BRIDGE
BUTTS LAPPED 5/8 I.R. AT POOP & FOLE

2 R. LANDING 5/4 IN BRIDGE
1 R. AT POOP & FOLE

50' x 104' TO RULE FITTED 60° x 95' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' IN WAY OF BRIDGE
BUTTS LAPPED 5/8 I.R. FOR 1/2 LEN 4 R
TO 3 R AT ENDS 3 R IN BRIDGE
FOR THIS STRAKE CLEAR OF BRIDGE
SPECIAL PLAN TO BE SUBMITTED

2 R. LANDING 5/4 IN BRIDGE
2 R. 0 WHERE REQ^d

50' x 104' TO RULE FITTED 60° x 76' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' IN WAY OF BRIDGE
BUTTS LAPPED 5/8 I.R. FOR 1/2 LEN 4 R
TO 3 R AT ENDS 3 R IN BRIDGE
FOR THIS STRAKE CLEAR OF BRIDGE
SPECIAL PLAN TO BE SUBMITTED

2 R. LANDING 5/4

80' x 60' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' FOR END
BUTTS LAPPED 5/8 I.R. THROUGHOUT

2 R. LANDING 5/4

80' x 60' FOR 1/2 LEN 0'
TO 44' AT ENDS 1/2 LEN 0' FOR END
BUTTS LAPPED 5/8 I.R. THROUGHOUT

2 R. LANDING 5/4

75' x 61' FOR 1/2 LEN 0'
TO 40' AT ENDS 1/2 LEN 0' FOR END
BUTTS LAPPED 5/8 I.R.

MARGIN SHELL ANGLE
2 1/2' x 3 1/2' x 50' FORE & AFT

MARGIN PLATE TO RULE 35' x 50' - 58' IN B.S.
FITTED ABOUT 44' x 50' - 58' IN B.S.
BUTTS LAPPED 5/8 I.R. THROUGHOUT

BASE KEEL 5' x 2 1/2' x 60' IS BAR
WITH 1/2' x 44' BULB PLATE FOR
ABOUT 180' 0' ANSHIPS

ALTERNATIVE ARRANGEMENT
OF MARGIN CONNECTIONS

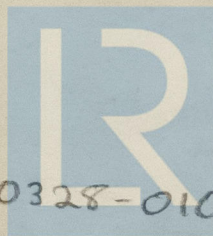
LITHGOWS LIMITED.

Nº 853.

S. S. "HARMATRIS"

MIDSHIP SECTION (AS BUILT).

GRK. 1st ENTRY REPORT Nº 19411.



© 2021

Lloyd's Register
Foundation

010328-010337-0169