

# MIDSHIP SECTION

## S.S. "HARPASA"

SCALE 1/2" = ONE FOOT.

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

DIMENSIONS:- 415'-0" B.P. x 56'-3" EXT. x 56'-0" MLD. x 27'-3" MLD. TO UPPER DK.

FIRST LONGITUDINAL NUMBER L = D = 415.0 x 27.25	= 11308.75
SECOND LONGITUDINAL NUMBER L * (B + D) = 415.0 x (56.0 + 27.25)	= 34548.75
PROPORTION L/D TO UPPER DECK = 415.0 x 27.25	= 15.23
PROPORTION L/D TO BRIDGE DECK = 415.0 x 36.75	= 11.29
D = MOULDED DEPTH	= 27.25
d = 27.25 - (3.83 + 33 EXTRA HEIGHT WINS BKT)	= 23.09
ERRECTIONS	= 84.30%

EQUIPMENT NUMBER	EQUIPMENT
SECOND LONGITUDINAL NUMBER L * (B + D) = 34548.75	
ROOF 38.83 x 8.5 x 3/4	= 247.54
BRIDGE 278.04 x 9.5 x 3/4	= 1966.78
FORECASTLE 36.00 x 8.5 x 3/4	= 229.50
SIDEHOUSES & CASING 67.0 x 8.0 x 1/2	= 268.00
SALOON HOUSE 22.5 x 8.0 x 1/2	= 118.00
CAPTAIN'S HOUSE 24.0 x 8.0 x 1/2	= 96.00
HOUSE ON ROOF DECK 32.0 x 7.5 x 1/2	= 120.00
EQUIPMENT NUMBER = 37594.57	

**RIVETING NOTE**

RIVETS IN FRAMES TO FLOORS AND CROSS-TIE PLATES IN AFT PEAK SPACED 5 DIAM. APART C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN FRAMES TO SHELL AT FLAT OF DOUBLE BOTTOM HALF LENGTH FORWARD SPACED 5 1/2 DIAM. (TWO COMPLETE ROWS)

RIVETS IN FRAMES TO FLOORS AT FLAT OF DOUBLE BOTTOM FORWARD HALF LENGTH FORWARD SPACED 6 1/2 DIAM. (TWO COMPLETE ROWS)

RIVETS IN SIDE FRAMES TO SHELL SPACED 7 DIAM. APART, 5 1/2 DIAM. APART IN WAY OF FORE AND AFT PEAK TANKS AND DEEP FRAMING FORWARD.

RIVETS IN BOTTOM FRAMES TO SHELL AFT HALF LENGTH FORWARD SPACED 7 DIAM. C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN 2 R. BUTTS OF OUTSIDE PLATING AND OF DECK STRINGER PLATES SPACED 3 1/2 DIAM. APART C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN 4 R. BUTTS OF OUTSIDE PLATING AND OF DECK STRINGER PLATES SPACED 4 DIAM. APART C<sup>2</sup> TO C<sup>2</sup>.

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 C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN BEAMS AND BUTTS OF BULKHEAD AND TUNNEL PLATING, MARGIN ANGLES AND WEATHER DECK STRINGER ANGLES AND BULKHEAD FRAMES TO BULKHEAD SPACED 4 1/2 DIAM. APART C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN FLAT KEEL ANGLES, VERTICAL ANGLES CONNECTING FLOORS TO CENTRE GIRDER, AND SHELL FLANGE OF WATERTIGHT BULKHEAD FRAMES SPACED 5 DIAM. APART C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN FRAMES TO FLOORS AFT HALF LENGTH FORWARD, REVERSE FRAMES TO FLOORS AND INNER BOTTOM PLATING, VERTICAL ANGLES TO FLOORS AND SIDE GIRDERS, IN BULKHEAD STIFFENERS (EXCEPT PEAK BULKHEADS) AND IN DECK PLATING TO BEAMS ON EVERY FRAME SPACED 7 DIAM. APART C<sup>2</sup> TO C<sup>2</sup>.

RIVETS IN SHELL CONNECTING ANGLES 5 IN EACH 28 1/2 SPACE AND 4 IN EACH 24 SPACE.

RIVETS IN CENTRE GIRDER TOP ANGLES 7 DIAM. APART C<sup>2</sup> TO C<sup>2</sup> NOV. WATERTIGHT.

RIVETS IN CENTRE GIRDER TOP ANGLES 3 DIAM. APART C<sup>2</sup> TO C<sup>2</sup> 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.

**SIDE FRAMING**

FRAMES SPACED 26 1/2" APART, 24" IN FORE AND AFT PEAKS.

MAIN SIDE FRAMES CLEAR OF DEEP FRAMING, TUNNEL RECESS & FORE & AFT PEAK TANKS 11 1/2 x 3 1/2 x 1/4 B.A. U.B.S. ALL TO UPPER DECK.

FRAMES IN ENGINE AND BOILER ROOM TO BE INCREASED .04 IN LEN OF WEB FRAMES (TO BE QUOTED IF BUNKER BULKHEAD FITTED)

FRAMES IN BOILER ROOM AND PERMANENT BUNKERS (HOLD & TUN. RKS.) TO BE INCREASED .08

MAIN SIDE FRAMES IN WAY OF TUNNEL RECESS 2 1/2 x 3 1/2 x 1/4 B.A. U.B.S. ALL TO UPPER DECK

MAIN SIDE FRAMES IN WAY OF DEEP FRAMING FORWARD = 10 1/2" ABOARD RULE POSITION OF COLLISION BULKHEAD (SEE PROFILE & DECK PLAN) 12 x 4 x 4 x 1/4" F. WITH 5 x 4 x 46 REVERSE BAR ALL TO UPPER DECK.

PEAK FRAMES 7 x 3 1/2 x 41 B.A. U.B.S. 5/2 FOR 7/8 RIVETS

BRIDGE TWEN DECK FRAMES 5 1/2 x 3 1/2 x 34 B.A. O.B.S. FITTED ON EVERY FRAME AND SCARPHED TO MAIN FRAMES AT UPPER DECK FITTED 6 x 3 1/2 x 30 B.A. N.B.S.

ROOF TWEN DECK FRAMES 6 1/2 x 3 x 42 B.A. O.B.S. ON ALTERNATE FRAMES SCARPHED TO MAIN FRAMES AT UPPER DECK WITH 4 1/2 x 3 x 38 O.A. INTERMEDIATE HANGING FRAMES.

FORECASTLE TWEN DECK FRAMES 6 1/2 x 3 x 42 B.A. O.B.S. ON ALTERNATE FRAMES WITH 5 x 3 x 38 O.A. INTERMEDIATE FRAMES BOTH SCARPHED OR BRACKETED AT UPPER DECK.

STEM 5 1/2 x 2 1/2

STERNPOST 10 1/2 x 7 1/2

RUBBER POST 10 1/2 x 7 1/2

ADDITIONAL SIDE GIRDERS IN WAY OF ENGINE & THRUST SEATING

**CENTRE GIRDER**

TO RULE 4 1/2 x .51 FOR 1/2 LEN Q. 41 AT ENDS

FITTED 46 x 46 FOR 1/2 LEN Q. 35 AT ENDS

1.56 IN BOILER SPACE BUTTS LAPPED 5 R.

VERTICAL ANGLES 3 x 3 x 40 SINGLE 50 IN B.S.

5 x 5 x 40 SINGLE UNDER ENGINE SPACE & THRUST SEATING 5 x 5 x 50 UNDER BOILER BEARERS

INNER BOTTOM PLATING 41 FOR 1/2 LEN Q. TO 36 AT ENDS

49 IN ENGINE SPACE, 55 IN BOILER SPACE BUTTS LAPPED 5 R. TO 1 R. AT ENDS SEAMS 1 R.

SEAMS 1 R. IN ENGINE SPACE BUTTS LAPPED 5 R. IN E.S.

FITTED 50 E.S. 67 B.S. (OWNERS)

TANK TOP CENTRE STRAKE TO RULE 49 1/2 x 49 FOR 1/2 LEN Q. TO 40 AT ENDS 49 IN ENGINE SPACE 55 IN BOILER SPACE

FITTED 78 x 46 FOR 1/2 LEN Q. TO 39 AT ENDS

49 IN E.S. 59 IN B.S. BUTTS LAPPED 5 R. TO 2 R. AT ENDS

FITTED 50 IN E.S. 76 IN B.S. (OWNERS)

FLOOR PLATES .36 THROUGHOUT IN HULLS AND ENGINE SPACE .40 IN BOILER SPACE

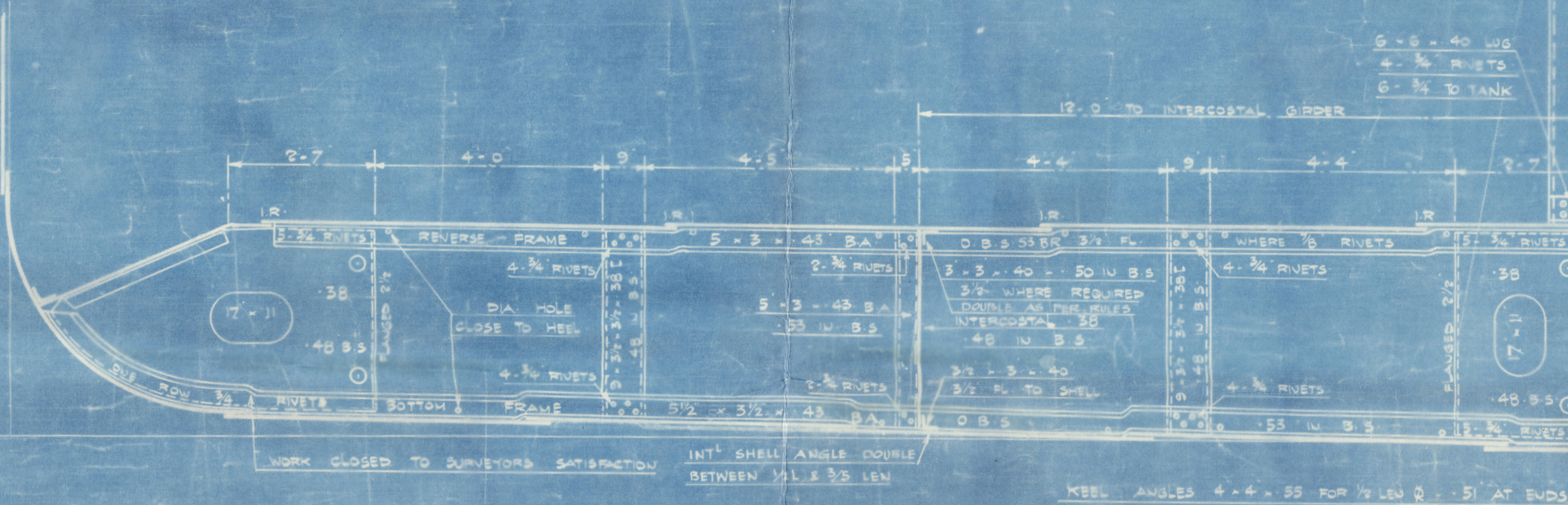
WATERTIGHT FLOORS 38 x 48 x 48 WITH STIFFENERS 5 1/2 x 5 x 38 ANGLE SPACED 30" APART FOR OVERFLOW

34.0 ABOVE TANK TOP

WING BRACKETS .45 IN HULLS .55 IN BOILER SPACE

MARGIN CONNECTION 5 x 5 x 45 SINGLE 55 IN BOILER SPACE WITH 11 x 7/8 RIVETS EACH FLANGE 12.78 RIV. FOR 1/2 LEN FOR IN WAY OF DEEP FRAMING 6 x 6 x 43 SINGLE WITH 10 x 7/8 RIVETS EACH FLANGE 48 IN R.R.

36 CONT. GUSSET PLATE ON EVERY FRAME WITH 5 x 7/8 RIVETS 8 x 7/8 RIVETS IN WAY OF DEEP FRAMING



SPECIAL PLAN OF BOTTOM STRENGTHENING FORWARD TO BE SUBMITTED LATER.

**DISPOSITION OF FLOORS**

SOLID FLOORS ON EVERY FRAME IN ENGINE SPACE AND FORWARD 1/2 LEN FORWARD UNDER BOILER BEARERS & BULKHEADS

PARTIAL SOLID UNDER THRUST ELSEWHERE SOLID FLOORS ON EVERY SECOND FRAME BRACKET FLOORS INTERMEDIATE

**KEEL OUT**

49 x 75 FOR 1/2 LEN Q. TO 1.65 AT ENDS BUTTS LAPPED 5 R. TO 3 R. AT ENDS

**A' IN**

78 x 59 FOR 1/2 LEN Q. TO 46 AT ENDS BUTTS LAPPED 5 R.

**B' OUT**

60 x 59 FOR 1/2 LEN Q. TO 40 AT ENDS BUTTS LAPPED 5 R.

**C' IN**

60 x 59 FOR 1/2 LEN Q. TO 46 AT ENDS BUTTS LAPPED 5 R.

**D' OUT**

60 x 59 FOR 1/2 LEN Q. TO 46 AT ENDS BUTTS LAPPED 5 R.

MARGIN PLATE TO RULE 35 x 48 x 58 IN B.S. FITTED ABOUT 46 x 48 x 69 IN B.S. 59 IN E.S. (OWNERS) BUTTS LAPPED 5 R. THROUGHOUT



LITHGOWS LTD

Nº 86H.

MIDSHIP SECTION.  
(AS BUILT).

S.S. - Harpasa

Greenock First Entry Report Nº 19693.

X/175-0119



© 2020

Lloyd's Register  
Foundation