

FABRICATED RUDDER.

S.S. N^{os} 934.

SCALE 1" = 1 FOOT.

DETAILS AS INDICATED.

RUDDER STOCK BEST FORGED STEEL.

NOTES

QUADRILATERAL $ABCD$ IS A (CIRCLE) $ABCD$ AND $\angle C$ IS 2 TIMES $\angle A$. $\angle B$ IS 4 TIMES $\angle D$.
TO FIND: $\angle A$, $\angle B$, $\angle C$ AND $\angle D$.
TO PROVE: $AB \parallel CD$, $AD \parallel BC$ AND AC BISECTS BD AND AC .

SOLN: $\angle A + \angle B + \angle C + \angle D = 360^\circ$ (ANGLES OF QUADRILATERAL)
 $\angle A + \angle B + 2\angle A + \frac{1}{2}\angle B = 360^\circ$ (GIVEN)
 $\frac{3}{2}\angle B + 3\angle A = 360^\circ$ (SIMILAR TRIANGLES)
 $\angle B + 2\angle A = 240^\circ$ (EQUATION 1)
 $\angle B = 240^\circ - 2\angle A$ (EQUATION 2)
PUTTING THE VALUE OF $\angle B$ IN EQUATION 1
 $\angle A + 240^\circ - 2\angle A + 2\angle A + \frac{1}{2}(240^\circ - 2\angle A) = 360^\circ$ (EQUATION 3)
 $\angle A = 108^\circ$ (VALUE OF $\angle A$ IN EQUATION 2)
PUTTING THE VALUE OF $\angle A$ IN EQUATION 2, WE GET
 $\angle B = 240^\circ - 2(108^\circ) = 24^\circ$
WE KNOW THAT $\angle A + \angle D = 180^\circ$ (ADjoining ANGLES OF QUADRILATERAL)
 $108^\circ + \angle D = 180^\circ$
 $\angle D = 72^\circ$
WE KNOW THAT $\angle B + \angle C = 180^\circ$ (ADjoining ANGLES OF QUADRILATERAL)
 $24^\circ + \angle C = 180^\circ$
 $\angle C = 156^\circ$

ALL INSIDE SURFACES TO BE COATED WITH BITUMINOUS SOLUTION. CORR
MIXTURE TO BE FILLED IN ALL COMPARTMENTS TO TOP OF PLATE LEVEL.
3" DIAM. FILLING HOLES TO BE ARRANGED WHERE NECESSARY AND CLOSING
DISCS WELDED INTO FILLING HOLES.

NOTE KEYWAYS CUT SQUARE-ENDS.
CORNERS NOT TO EXCEED 1/4" RADIUS.
DEPTH OF KEYWAYS MEASURED AT
SIDE OF KEYWAYS.

Hole for 2" dia. LIFTING Eye
Bored & Tapped 4" into Stock

WIDE END OF KEY IN SPARE
TILLER AT TOP

$\frac{3}{4}$ " TAPERING TO $\frac{1}{4}$ "

MAIN TILLER

FACE MACHINED, NO

RAD $1\frac{1}{2}$ " THICK
STOCK.

NOTE - PINTLES TO BE OF STEEL & EFFICIENTLY FITTED AS PER DETAILS
BRASS BUSHES MUST BE TURNED IN PLACE AND PROPERLY SHRUNK ON PIN

DETAIL of ALL RUBBER GUDGONS & PINTLES
[EXCEPT BOTTOM GUDGON]
SCALE 1/4 FULL SIZE

NOTE WHEN FLOATING RUDDER, SLIGHT
CLEARANCE TO AG LEFT ASTN. BOTTOM OF
BOTTOM PIVLE & BEARING DISC, TO
INSURE THAT CARRIER IS BEARING ENTIRE
WEIGHT OF RUDDER.

DETAIL OF BOTTOM GUSSET & BEARING ANGLE
SCALE 1/4 FULL SIZE
DETAILS NOT INDICATED SIMILAR TO SKETCH ABOVE

ELEVATION OF GUDGEON — LOCKING ARM
SCALE 1/4 FULL SIZE

RIVET HOLES IN CASTING DRILL
BY SHIPBUILDER.

SECTION THREE TOP RUDDER AREA

SECTION THRO' TOP INTERMEDIATE RUDDER

SECTION THRO' INTERMEDIATE RUBBER ARM

DETAIL of LIFTING EYE
SCALE $\frac{1}{2}$ FULL SIZE

SECTION THRO' BOTTOM RUDDER AREA

SECTION THREE 'A' -

two of 6x6 bar welded
to side plates

ELEVATION OF RUBBER WITH STARBOARD PLATE OFF.

PLATE & ANGLE CUT
AWAY ROUND CORNER
& WELDED.
1" DIAM. RIVETS
RIVET HOLES IN CASTING
DRILLED BY SHIPBO³

LIGHT CLOSING WELD
ALL ROUND SNUGS.

Full
~~Light cleaning~~ W
CLEAR OF WRAPPED
PLATES

SECTION B — LOOKING AFT

14-2-45

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004887-004892-0219

LITHGOWS LTD

(16)

NO 934

FABRICATED
RUDDER

934

S.S. "CAPE WRATH" ★

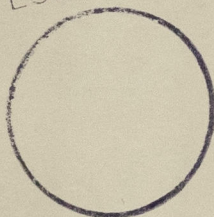
GRK. 1ST ENTRY REPORT NO 21002.

935

S.S. "CAPE RODNEY"

GRK. 1ST ENTRY REPORT NO

RECORDS DEPT.
LONDON.



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004887-004892-0219