

MODULUS OF SECTION

Section in way of proposed 20' hatch.

NAME:—

VESTFOLD

Particulars of Vessel

535 x 74 x 48.75

Height of Assumed Axis above Keel

21'

BELOW ASSUMED AXIS.								ABOVE ASSUMED AXIS.							
ITEM.	SCANTLING.	AREA.	h.	Ah.	Ah ² .	d.	Ad ² .	ITEM.	SCANTLING.	AREA.	h.	Ah.	Ah ² .	d.	Ad ² .
FLAT KEEL ...								TOP DECK STRINGER ...	92 x .84	77.3	278	2150	59800		
" " ...								" " <i>Longls</i> ...	8 x 53 m ²	42.4	279	1184	33100		
CENTRE GIRDER PLATE ...								" " ANGLE ...	6 x 6 x .90	10.0	278	278	7740		
" " BOTTOM ANGLES								" " PLATING ...	240 x .68	163.0	28.1	4580	120860		
" " TOP ANGLES								2ND DECK STRINGER ...							
CENTRE STRAKE TANK TOP ...								" " ANGLE ...	<i>as before</i>	225.7		3052	41260		
MARGIN PLATE ...								" " PLATING ...							
" " ANGLES ...								3RD DECK STRINGER ...							
BOTTOM PLATING ...								" " <i>Longls</i> ...							
BILGE PLATING ...								" " <i>after 1st stringer</i> ...		21.9		570	14840		
SIDE PLATING ...								" " PLATING ...							
TANK TOP PLATING ...								4TH DECK STRINGER ...							
No. 1 SIDE STRINGER PLATE								" " <i>Longls</i> ...		25.1		510	10710		
" " " ANGLES								" " <i>Longls</i> PLATING ...		99.0		682	5660		7480
No. 2 " " PLATE								SHEERSTRAKE ...	78 x .94	73.2	252	1845	46800		3100
" " " ANGLES								" " ...							
No. 3 " " PLATE								STRAKE BELOW SHEERSTRAKE	71 x .84	59.6	19.6	1165	22900		2200
" " " ANGLES								SHELL PLATING ...	<i>as before</i>	167.3		1440	12400		49500
SIDE KEELSON PLATE ...								SIDE STRINGER PLATE ...							
" " TOP ANGLES ...								" " ANGLES ...		27.8		56	110		
" " BOTTOM "								<i>CL Bld</i>		6.9		15	30		
TOTALS BELOW ASSUMED AXIS.								TOTALS ABOVE ASSUMED AXIS.		999.2		17527	376210		62280
								" " BELOW ASSUMED AXIS.		925.4		14892	272800		63850
								SUM OR DIFFERENCE ...		1924.6		2635	10500		126130
								Ad ² /12					659510		10500

From Curves. L = 23.8 T = 21.8 L.L.C. 18.17
 = 31' above L.L.C. = 20' above L.L.C.

say 60% between L & T = 23.0

as built with d = $\frac{49,800}{74 \times 23.0} = 29.3$
 + tankers $\frac{1.5}{30.8}$

with 75m² added to dk $d = \frac{55,800}{74 \times 23.0} = 33.2$
 + tankers $\frac{1.5}{34.7}$

N.B.—The assumed axis is to be taken below lowest deck. The Top Deck is the uppermost strength deck, and other decks are to be numbered from that deck.

Draft desired = 33-82 extreme

75m² and increase in draft of 3.9' & increase in draft of 2.7' each draft say 52" for 66 x 80 draft on shafts at 2 ft also double at end of new hatchway

718,910

237

11,200

707,710

1415,420

2538

55,800

SUMMARY.

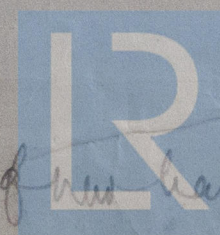
MOMENT OF INERTIA ABOUT ASSUMED AXIS ...	(1.)	659510
NEUTRAL AXIS ABOVE ASSUMED AXIS (x) ...	(2.)	1.37
TOTAL AREA x x ² ...	(3.)	36.10
CORRECTED INERTIA (ONE SIDE ONLY) = (1.) - (3.) ...	(4.)	655900
CORRECTED INERTIA (BOTH SIDES) ...		1311800
VALUE OF "Y" AT HEEL OF GUNWALE BAR ...		26.38
MODULUS OF SECTION AT GUNWALE ...		49,800
VALUE OF "Y" AT KEEL ...		
MODULUS OF SECTION AT KEEL ...		

add 75m² dk

75.0 28.1 2110 59400
 1999.6 4745 718910

Initials *WJ*

Date 8.7.42



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W270-0031