

# MODULUS OF SECTION

Draft. 23'-0" rounded (about).

NAME:— T.S.S. Speedonia

Particulars of Vessel 315 x 46.875 x 28.83

Height of Assumed Axis above Keel 14 ft.

BELOW ASSUMED AXIS.									ABOVE ASSUMED AXIS.								
ITEM.	SCANTLING.	AREA.	h.	Ah.	Ah <sup>2</sup> .	d.	Ad <sup>2</sup> .		ITEM.	SCANTLING.	AREA.	h.	Ah.	Ah <sup>2</sup> .	d.	Ad <sup>2</sup> .	
FLAT KEEL ...	1/2 x 11 x 2 3/4	15.10	14.4	218.0	3140	.91	12		TOP DECK STRINGER ...	48 x 52	24.90	15.0	373.0	5600			
Centre Girder Plate ...	9 x .65	5.85	14.4	84.2	1210				" " " ...								
" " BOTTOM ANGLES	2 x 78 x .58	22.60	10.7	242.0	2590				" " ANGLE ...	4 1/2 x 4 1/2 x 5 1/4	4.57	15.0	68.5	1030			
" " TOP ANGLES	1/2 x 6 x .50	2.88	13.8	39.7	548				" " PLATING ...	89 x .34	30.20	15.45	467.0	7220			
CENTRE STRAKE TANK TOP ...									2ND DECK STRINGER ...	45 x 45	20.20	7.0	141.5	990			
MARGIN PLATE ...									" " ANGLE ...	4 1/2 x 4 x 4 1/2	3.40	7.0	23.8	167			
" " ANGLES ...									" " PLATING ...	18 x .45	8.10	7.8	63.2	493			
BOTTOM PLATING ...	151 x .60	90.60	18.8	1222.0	16500				3RD DECK STRINGER ...	5-10 x 3 1/2 x 6 1/4	4.60	7.95	36.6	291			
BILGE PLATING ...	101 x .65	65.70	12.6	827.0	10420				" " ANGLE ...	18 x .40	7.20	20.10	144.5	2900			
SIDE PLATING ...	48 x .65	31.20	11.0	343.0	3770	2.5	195		" " PLATING ...	54 x .40	21.60	17.70	382.0	6760	4.5	437	
TANK TOP PLATING ...	129 x .65	83.80	5.0	420.0	2100	10	8880		4TH DECK STRINGER ...	5 x 5 x 4 1/2	4.39	15.65	68.7	1075			
No. 1 SIDE STRINGER PLATE	2 x 11 x .44	9.68	4.8	46.5	223				" " ANGLE ...	1/2 x 5 x 5 x 4 1/2	2.20	20.20	44.6	906			
" " " ANGLES	4-11 x 3 1/2 x 7 1/2	45.08	4.8	216.0	1040				" " PLATING ...	1/2 x 26 x .40	5.20	15.90	82.7	1315			
No. 2 " Kelson PLATE	18 x .46	8.28	10.6	87.8	932	1.5	19		SHEERSTRAKE ...	1/2 x 32 x 3 1/2 x 4 1/2	1.32	16.0	21.1	338			
" " " ANGLES	2-4 1/2 x 4 1/2 x .55	9.30	9.9	92.0	910				" " PLATE ...	1/2 x 3 x 4 1/2	.60	16.0	9.6	154	2.5		
No. 3 " " PLATE	2-6 1/2 x 4 1/2 x .45	9.50	11.1	105.5	1170				STRAKE BELOW SHEERSTRAKE	44 x .60	26.40	10.9	287.0	3135	3.67	355	
" " " ANGLES	10 x .44	4.40	9.75	42.9	418				SHELL PLATING ...	53 x .65	34.50	7.2	248.0	1785	4.4	667	
2 SIDE KEELSON PLATE	12 x 4 1/2 x .44	6.97	10.6	73.8	782				" " PLATING ...	45 x .60	27.00	3.45	93.0	321	3.75	380	
" " " TOP ANGLES	2-6 1/2 x 4 1/2 x .45	9.50	11.0	104.5	1150				" " " ANGLES	23 x .65	14.92	1.10	16.4	78	2.0	60	
" " " BOTTOM	1/2 x 3 1/2 x 3 1/2 x 4 1/2	1.44	2.4	3.5	8				TOTALS ABOVE ASSUMED AXIS.		374.74		4554.4	68240		4355	
" " " " " " " "	1/2 x 78 x .44	17.13	4.8	82.2	394	6.5	725		" " BELOW ASSUMED AXIS.		466.13		4489.8	50400		9351	
" " " " " " " "	1/2 x 23 x .44	5.06	1.0	5.1	5	2	20		SUM OR DIFFERENCE		840.87	.07	64.6	118640		13706	
TOTALS BELOW ASSUMED AXIS.		466.13		4489.8	50400		9351		Ad <sup>2</sup> /12					1142		1142	

795

78

## SUMMARY.

MOMENT OF INERTIA ABOUT ASSUMED AXIS ...	(1.)	119782
NEUTRAL AXIS ABOVE ASSUMED AXIS (x) ...	(2.)	—
TOTAL AREA x x <sup>2</sup> ...	(3.)	—
CORRECTED INERTIA (ONE SIDE ONLY) = (1.) - (3.) ...	(4.)	119782
CORRECTED INERTIA (BOTH SIDES) ...		239564
VALUE OF "Y" AT HEEL OF GUNWALE BAR ...		14.83
MODULUS OF SECTION AT GUNWALE ...		16,150
VALUE OF "Y" AT KEEL ...		14.0
MODULUS OF SECTION AT KEEL ...		17,100

Value of "y" at Trunk corner.  
Modulus of section at Trunk corner.

20.0

11,978

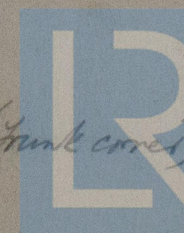
Initials

Date

22/1/21

I (gunwale) = 16,150  
23 x 46.875

I (Trunk corner) = 11,978  
23 x 46.875  
= 11.1



2020

W601-0348

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.



W601-0348

RETAIN



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