

## RMS *OLYMPIC* SPECIFICATION FILE

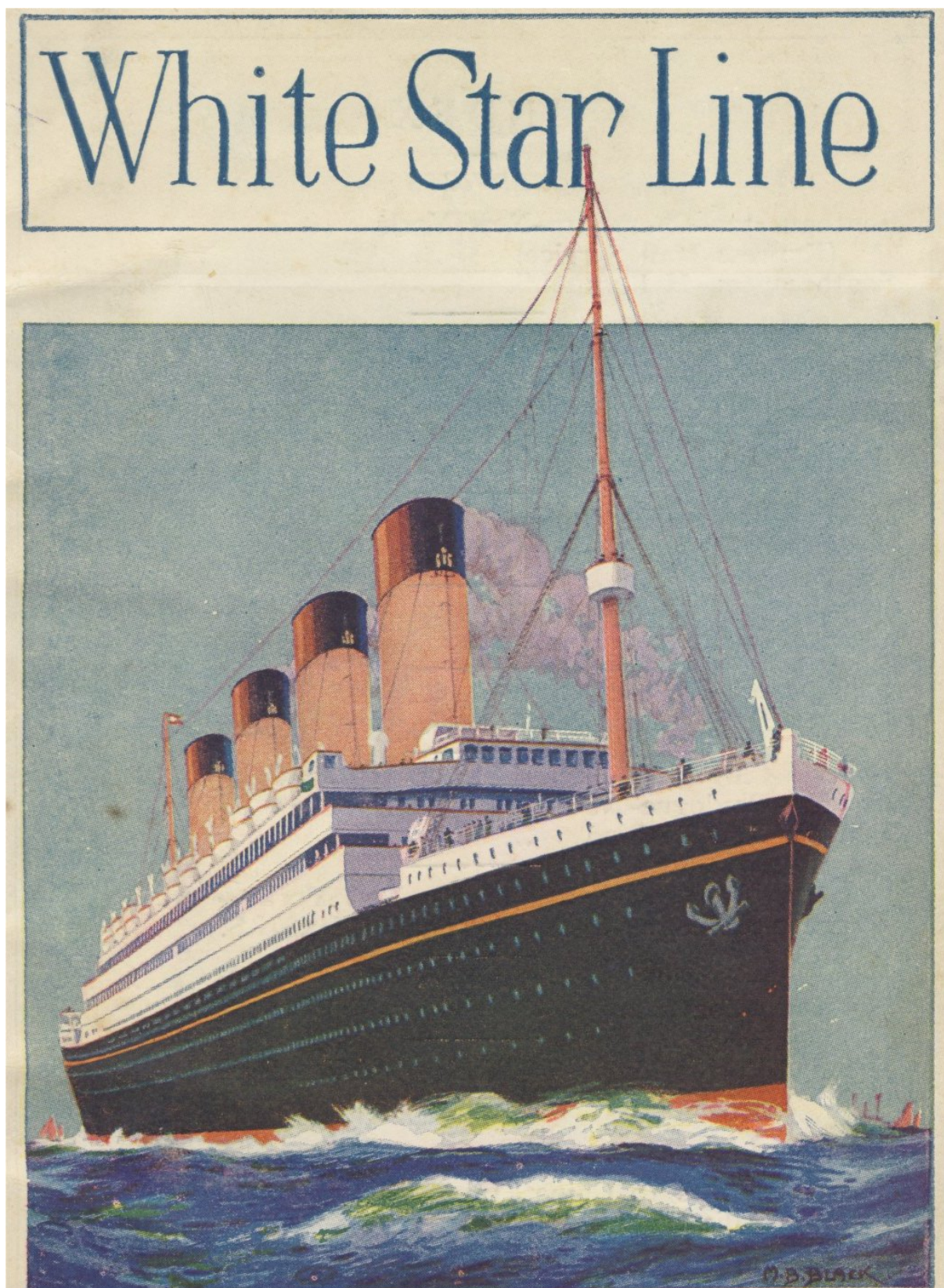
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*Olympic* entered service in 1911 as the world's largest ship. Although she was surpassed in spring 1912 by *Titanic*, she regained the title after her sister's loss only to lose it to *Imperator* in 1913. From 1913, she was the largest British ship in service. Although *Aquitania* could claim the title after 1914, based on her length and breadth, *Olympic's* gross tonnage (which rose after the 1913 refit) was greater than her rival's and remained so until her withdrawal from service in 1935. Gross tonnage is a better measure of size, given that it is a measure of enclosed space. *Britannic* claimed the title of the largest British ship when she was in service from December 1915 to November 1916. In the 1920s, as White Star's 'Ship Magnificent,'

Right: *Olympic* in the Solent  
(GKCL Collection.)







*Above: Olympic appears on a sailing list issued by the White Star Line in March 1926.  
(Author's Collection.)*

## RMS Olympic Specification File

*Olympic* was advertised as the largest triple-screw steamer in the world.

The specifications given here relate to *Olympic* as she was in the mid 1920s, prior to the 1927-28 refit when her net tonnage figure changed and tourist third class was introduced. However, the vast majority of these measurements and figures remained the same in subsequent years. A notable exception is the passenger numbers, as tourist third class was introduced alongside second class (before second class was abolished entirely by the end of 1931), first class staterooms became tourist class, and third class shrank as *Olympic's* service continued in the early 1930s. As always, different documents give multiple different figures for passenger and crew capacities, and those here should be seen in that context. Even here, the alternate first and second class accommodation information is contradictory.

Some dimensions are given in feet as decimals: for instance, the ship's length of 882 feet 9 inches was given as 882.75 feet, which has been rounded to 882.7 feet (and is sometimes seen as 882.8 feet in other sources). However, to remain faithful to the original source material the imperial measurements have been given in both decimals and feet and inches, throughout the file; for instance the length of the single ended boilers is given as 11 feet 9 inches, or 11'9" in short. In regard to the watertight subdivision, there were originally fifteen main transverse watertight bulkheads, and clearly the figure here of sixteen was a product of changes during the 1912-13 refit rather than her original construction.

The horsepower figures, given for both the reciprocating engines and the turbine, are not a maximum that the engines could develop. However, they do seem higher than the average power developed in normal service to enable *Olympic* to maintain her service speed. While 46,000 horsepower was required for a speed of 21 knots, the figures given here total 55,000 horsepower. In 1911, it was stated that *Olympic's* engines developed 59,000 horsepower, so that was apparently the maximum figure developed up to that time.

### RMS *Olympic* Specifications:

BUILDER, REGISTRATION:	
Builder:	Harland & Wolff, Ltd.
Registered Date:	1911
Class:	Not classed
Board of Trade passenger certificate:	Yes
Load line certificate:	Yes
No. of propellers:	3
Normal weather, average speed (knots):	21

## Mark Chirnside's Reception Room

DIMENSIONS:	
Length overall, feet:	882.7
Length between perpendiculars, feet:	850
Breadth, moulded, feet:	92
Breadth, extreme, feet:	92.5
Depth, moulded, side, feet:	64.67
Depth, moulded, centre, feet:	65.67

TONNAGE:	
Gross:	46,439.48
Deductions for erections, propelling space, etc.:	24,616.7
Net:	21,822.84
Nationality:	British
Official number:	131,346
Builder's number:	400

CREW:	
Maximum, Deck Dept.:	99
Maximum, Engine Dept.:	164
Maximum, Victualing Dept.:	570
Grand total:	833

DRAFT, DISPLACEMENT & FREEBOARD:	
Light	
Draft, feet:	27' 10½"
Displacement, tons:	40,850
Tons per inch immersion:	138.8
Block co-efficient:	.66



## *RMS Olympic Specification File*

DRAFT, DISPLACEMENT & FREEBOARD (cont'd):	
Summer	
Draft, feet:	34' 10¼"
Displacement, tons:	52,310
Freeboard, feet:	30' 9"
Tons per inch immersion:	143.8
Block co-efficient:	.68
Deadweight tons:	11,460

TANKS:	
Double Bottom Tanks:	
Fresh water only, tons:	1,284
Salt water only, tons:	3,340
Fresh or salt water, tons:	796 F. or 820 S.
Peak Tanks:	
Salt water, tons:	353
Total fresh water, tons:	2,080
Total salt water, tons:	4,513
Total [fuel] oil, tons:	7,655
Domestic Tanks:	
Fresh water, tons:	792
Gallons:	177,408

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WATERTIGHT SUBDIVISION, CARGO AND APPLIANCES:	
No of transverse watertight bulkheads:	16
Cargo holds:	5
Size of largest hatch on Weather Deck:	16 x 20
No. of winches available for cargo:	3 steam, 4 electric, 6 electric cranes
Special appliances:	And Submarine Signal, Passenger Elevator

DYNAMOS:	
Number:	4
Makers:	W. H. Allen & Son
Voltage:	10
Total output in kilowatts:	1,600

EMERGENCY DYNAMOS:	
Makers:	2-Lawrence Scott
Total output in kilowatts:	120

PASSENGERS:	
1 <sup>st</sup> CLASS	
Permanent rooms:	301
Permanent berths:	710
Alternative 1 <sup>st</sup> or 2 <sup>nd</sup> class rooms:	86
Alternative 1 <sup>st</sup> or 2 <sup>nd</sup> class berths:	237
Max number of berths:	947
Saloon seats:	B-deck: 168 D-deck: 544 722 total

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PASSENGERS:	
2 <sup>nd</sup> CLASS	
Permanent rooms:	105
Permanent berths:	342
Alternative 1 <sup>st</sup> or 2 <sup>nd</sup> class rooms:	88
Alternative 1 <sup>st</sup> or 2 <sup>nd</sup> class berths:	274
Alternative 2 <sup>nd</sup> or 3 <sup>rd</sup> class rooms:	52
Alternative 2 <sup>nd</sup> or 3 <sup>rd</sup> class berths:	154
Max number of berths:	770
Saloon seats:	350

PASSENGERS:	
3 <sup>rd</sup> CLASS	
Rooms:	272
Berths in rooms:	1,100
Berths open:	-
Alternative 2 <sup>nd</sup> or 3 <sup>rd</sup> class rooms:	52
Alternative 2 <sup>nd</sup> or 3 <sup>rd</sup> class berths:	154
Max number of berths:	1,234
Saloon seats:	467

CARGO:	
Capacity of all cargo spaces, excluding 3 <sup>rd</sup> class spaces, Bridge spaces, And refrigerated spaces, cubic ft.:	68,280
3 <sup>rd</sup> class spaces available for cargo, cubic feet:	nil
Refrigerated spaces available for cargo, cubic feet:	15,600
Grand total of cargo space, cubic ft.:	83,800

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REFRIGERATED CARGO:	
No. of compartments:	1
No. of cubic ft.:	15,600
No. of quarters:	2,155
System:	CO2 & brine

FUEL:	
Consumption	
Per day, tons:	600
Per 100 knots:	119
Class of fuel:	Oil, American
Double bottom, oil taken at 38 c. ft. per ton, Coal taken at 44 c. ft. per ton:	196,384 cub. ft. 5,168 tons
Reserve bunkers, oil taken at 38 c. ft. per ton:	94,506 cub. ft. Nos 1 & 3 2,487
Total fuel tons:	7,655

BOILERS:	
Type:	Scotch
Double ended:	24
Single ended:	5
Dimensions length:	S.E. 11' 9", D.E. 20' 0"
Dimensions dia. or width:	28 @ 15' 9", 1 D.E. @ 13' 6"
Maker:	Harland & Wolff, Ltd.
Date:	1911
Pressure, lbs. per sq. Inch:	215



## *RMS Olympic Specification File*

<b>FURNACES:</b>	
Number and type:	4,013
Length over tube plates:	219,504
Dia. least width inside:	153 @ 3' 9", 6 @ 3' 3"
Length of fire bars:	153 @ 5' 9", 6 @ 4' 9"
Grate area, square ft.:	3,430
Heating surface, square ft.:	142,454
Natural or forced draught:	Natural
Type of oil fuel system:	White
No. of burners:	159

<b>ENGINES:</b>	
Type:	4 cylinder triple [expansion]
Makers:	Harland & Wolff, Ltd.
Date:	1911
Cylinders (Diameters):	
H.P.	54"
I.P.	84"
I.P.	97"
L.P.	97"
Stroke:	75"

<b>PROPELLERS:</b>	
Reciprocating:	
Diam, ft.:	22' 9"
Pitch, ft.:	36' 9"
Expand. surface, sq. ft.:	160
Turbine:	
Diam, ft.:	16' 6"
Pitch, ft.:	14' 6"
Expand. surface, sq. ft.:	120

## Mark Chirnside's Reception Room

HORSEPOWER:	
Average reciprocating IHP:	37,000
Average turbine SHP:	18,000

TURBINES:	
Type:	Parson's
Makers:	Harland & Wolff, Ltd.
No. of rotors:	1
No. of stages ahead:	6
Ahead propeller revs. per min.:	120 [ <i>sic</i> , 165]

**Note:** Although the specifications given here are very technical in nature, some simple abbreviations are easily understandable, while others require a more lengthy explanation.

**Reg'd.:** Registered.

**Cert.:** Certificate.

**Dispt.:** Displacement.

**W.T.:** Watertight.

**Refrig'd.:** Refrigerated.

**lbs. per sq. inch:** Pounds per square inch.

**Revs. per min.:** Revolutions per minute.

**C. feet./Cub feet:** Cubic feet.

**Tons per inch immers'n.:** Tons per inch immersion, or the number of tons that are required to change the draught of the ship by one inch at a given level of draught.

**Block co-eff.:** Block co-efficient. This is the ratio of the underwater volume of a ship to the volume of a rectangular block having the length, breadth and draft of the ship.

**Deadweight:** The deadweight is the difference between the loaded displacement of the ship and the displacement when it is completely empty of cargo, fuel, passengers, crew, etc.

**Trans.:** Transverse, i.e. a watertight bulkhead running across the ship, from side to side, rather than along the ship.

**Expand. surface sq. ft.:** Expanded surface area of the propeller, in square feet.

**S.H.P.:** Shaft horsepower, the method of measuring a steam turbine's power output.

**H.P., I.P. and L.P.:** High pressure, intermediate pressure, and low pressure. Majestic's turbines had three stages when running ahead, as steam entered at high pressure and was reduced to a lower pressure.

**ACKNOWLEDGEMENTS**

Scott Andrews' assistance - offering clarifications and spotting several mistakes that were originally missed during proofreading - is greatly appreciated. However, he is not responsible for any errors that may have crept in.

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