

Marshall Brothers,

ENGINEERS,

& Iron Ship Builders,

Willington, N^o SOUTH SHIELDS.

N^o

VESEEL

Specification of an
IRON SCREW STEAMER.

Class ¹⁸⁶² 19.6.63 7 To class at Lloyds 9 years A1.
and marked *Spar decked*

Dimensions Length of keel and Fore rake 230 feet
Breadth 32 " 8^{ins}

Depth of Hold under main deck 17 " 8^{ins}

Height from main to Spar deck 7 " 8^{ins}

Under 900 Tons below main deck built on 800 Tons

^{Scale} including Spar deck about 1200 Tons

Tonnage About Tons Builders measurement

Keel Of hammered iron $\frac{7}{2}$ " x 3" in one piece
from Screw frame to Stern head

Stern Of same section as Keel $\frac{7}{2}$ " x 3"

Propellor post All in one piece of forged Iron After post
and 9' x 5" Forepost 9' x 5" the lower part
Stern post being a continuation of the keel to which it
will Scarf Boss according to Engineers
dimensions there not being less than
of solid iron round the aperture

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IRON 498 - 0333 (1/6)

Frames of angle Iron $4\frac{1}{2} \times 3 \times \frac{9}{16}$ in one piece from
Keel to Gunwale placed 2 inches centre
to centre

Reverse Angle Iron $3 \times 3 \times \frac{7}{16}$ to every other
frame from ^{middle deck} top to bottom securely rivetted
to the frames. ~~the other to upper turn of Bulk~~

Floors of plates 23" deep and $\frac{9}{16}$ " thick, to every
frame those aft to be of increased depth to
stiffen the frames in way of Screw Shaft
46" ^{carried to 46" up at turn of Bulk}

Keelsons of the description known as Intercostal
formed by plates placed between each floor
and rivetted to the Floors extending
above the floor An Angle Iron
is placed on the top of the floors on each
side of Keelson plates and rivetted to the
Reverse angle Iron of the floors and also rivetted
through and through the Keelson plate

Keelson formed of plate $15 \times \frac{11}{16}$ with four Angle Irons
 $5 \times 4 \times \frac{8}{16}$



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Bilge Keelsons & Bilge Keelson of Two Angle Irons $5" \times 4" \times \frac{9}{16}$
rivetted back to back placed on floor ends at
(with bulk plate & hood by 12" thick)
Lower Turn of Bilge running fore and aft between
Stringer of same between Bilge Keelson & hold Beams
- bulk between in case of collision of hold being
13 1/2" depth bilge ych.

Beams Of Bull Iron $8" \times \frac{1}{2}"$ with a Reverse Angle
Iron $3" \times 3" \times \frac{3}{8}$ placed on each side at the
upper edge and rivetted thereto. A Beam to
be placed to every alternate frame except in
way of Hatches. Hold Beams to every second
& fourth frame and the
whole secured by knee plates and by Stringer
plates. Beam ends to be turned down to form knees
Spar deck beams $7" \times \frac{7}{16}"$ with angle irons
 $2\frac{3}{4}" \times 2\frac{3}{4}" \times \frac{5}{16}"$

Middle Deck

Stringers Of Plates 33" broad $\frac{7}{16}"$ thick placed on the
Main Deck Beams and rivetted to the Reverse
Angle Iron thereof to be fitted home and rivetted
to the outside plating.
Spar deck Stringer $24" \times \frac{7}{16}"$

Hold Beam Of $24" \times \frac{7}{16}"$ as Main Deck and sim.
Stringers. - ilarly secured.

Bulkheads Four in number formed of plates $\frac{3}{8}"$ thick
also Collision Bulkhead
and stiffened with angle Iron $3" \times 3" \times \frac{7}{16}$
placed 30" apart made watertight and
properly fitted with sluice valve communi-
cated with from the Deck. Coming up to Main
Deck

Plating

Garboard Strakes

$\frac{11}{16}$ "

From do. to Bilge

$\frac{5}{8}$ "

Bilge

$\frac{3}{8}$ "

Sides

$\frac{9}{16}$ "

Shear Strakes

$\frac{3}{4}$ "

Length not less than 7 paces
ends $\frac{1}{2}$ "
For $\frac{3}{4}$ of the length

of Ship, ends $\frac{7}{8}$ "

Sides of Ship above main deck all $\frac{1}{2}$ " plates
except the top streak of $\frac{3}{4}$ of the length of ship $\frac{9}{16}$ "

Rudder Stock

Of ⁵⁴ forged iron properly framed and plated with plates $\frac{3}{8}$ " thick pintles made out of the solid Iron and the Rudder made to unship & to have screw ^{gear} to steer by to be efficiently stayed

Rivetting

From Garboard Strake to upper ^{part of} turn of Bilge to be double rivetted. all Butts double rivetted remainder single except Shear Strake which is ^{to be} double rivetted. Rivetting to be in accordance with Rules Sect. 11

Size of Rivets According to Lloyd's Rules and to be regularly spaced and carefully punched

Spar Deck

Waterways To be iron Gutter waterways filled in with pine or cement

Bulwarks Of iron of plates $\frac{1}{4}$ " thick



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Cook House

Fitted on Deck with Cook's Hearth complete with all necessary saucepans Steamers Baking pans &c &c.
for 100 people

Painting

The outside of Vessel to have 3 Coats of Best paint care being taken that the surface of the plates are properly scraped and cleaned before being coated and 1 coat of some other approved color. The inside of Vessel to have 2 coats of Best Paint.

Deck-work and inside of Bulwarks to have three

Coats as approved
Bottom inside to turn of Bilge to be Cemented with Portland Cement to form Ribs & Keel of Limber holes or done with Smyth & Co enamel

Pumps

A pump in each compartment with Gear complete. brass boxes & one set of Spare gear to each pump

Bunkers

All available space in Engine room to be used as Bunkers if required. & a Spare Bunker hold 150 Tons the Bulkhead of this to be the Government one.

Decks

Of yellow pine 6 x 3½ secured to the Beams by ^{sewing} bolts driven from the top and secured ^{with nuts under} to the Reverse Angle Iron of Beams.
Spar Deck 6 x 3



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Cabin and
General
Accommodation

A Spar Deck fore & aft with no
Cabin fitted

Forecastle

Berths for crew under Spar deck

Ceiling

To turn of Bilge ^{Plank} ~~Red~~ Pine $\frac{1}{2}$ thick

Comings

Of Iron

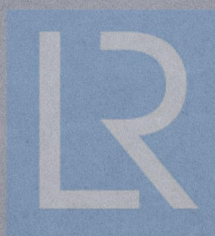
Hatches

Of such size as may be required

Windlass

A properly fitting windlass to be supplied
worked by Patent Purchase also
Winch Capstan on Forecastle

Fleets to be put on each Side of Windlass



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