

REPORT ON MACHINERY.

No. 6855.

Port of Belfast.Received at London Office MON 7 NOV 1910No. in Survey held at BelfastDate, first Survey 1st MarchLast Survey 29th Oct. 1910

Reg. Book.

on the T. S. S. Star of India(Number of Visits 63.)Master J. J. Kearney.Built at BelfastBy whom built Workman Clark & Co LtdTons { Gross 7316Net 4601When built 1910Engines made at Belfast.By whom made Workman Clark & Co Ltd (N^o 247)when made 1910Boilers made at DoBy whom made Do(N^o 247) when made 1910

Registered Horse Power

Owners Star Line LtdPort belonging to BelfastNom. Horse Power as per Section 28 756Is Refrigerating Machinery fitted for cargo purposes YesIs Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Twin Triple ExpansionNo. of Cylinders 6No. of Cranks 6Dia. of Cylinders 22", 37", 62"Length of Stroke 45"Revs. per minute 90

Dia. of Screw shaft

as per rule 13.16Material of SteelIs the screw shaft fitted with a continuous liner the whole length of the stern tube Yes

Is the after end of the liner made water tight

in the propeller boss Yes If the liner is in more than one length are the joints burned Yes

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes

If two

liners are fitted, is the shaft lapped or protected between the liners YesLength of stern bush 4.8"

Dia. of Tunnel shaft

as per rule 11.9"

Dia. of Crank shaft journals

as per rule 12.49"Dia. of Crank pin 13.4"Size of Crank webs 88" x 18.5"

Dia. of thrust shaft under

collars 13.4"Dia. of screw 15.9"Pitch of Screw 18.3"No. of Blades 3State whether moveable YesTotal surface 70 sq ftNo. of Feed pumps 2Diameter of ditto 6"Stroke 20"Can one be overhauled while the other is at work YesNo. of Bilge pumps 2Diameter of ditto 6"Stroke 20"Can one be overhauled while the other is at work YesNo. of Donkey Engines 8Sizes of Pumps 8" x 5.5" x 8" S.S. 4" x 4" x 5" S.S.

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 Blt Rotm 4-3.2"8" x 2.2" x 4" S.W. 8" x 12" x 12" Aux AirRef. Ctr In Holds, &c. N^o 1-2-3.2" N^o 2-2-3.2" N^o 3-2-3.2"N^o 4-2-3.2" N^o 5-2-3.2" Tunnel well 1-2.2"No. of Bilge Injections 2sizes 8"Connected to condenser, or to circulating pump pumpAre all the bilge suction pipes fitted with roses YesAre the roses in Engine room always accessible YesAre the sluices on Engine room bulkheads always accessible YesAre all connections with the sea direct on the skin of the ship YesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YesAre the Discharge Pipes above or below the deep water line bothAre they each fitted with a Discharge Valve always accessible on the plating of the vessel YesAre the Blow Off Cocks fitted with a spigot and brass covering plate YesWhat pipes are carried through the bunkers noneHow are they protected YesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections 21.9.10of Stern Tube 21.9.10Screw shaft and Propeller 21.9.10Is the Screw Shaft Tunnel watertight YesIs it fitted with a watertight door Yesworked from top platformBOILERS, &c.—(Letter for record S.)Manufacturers of Steel Wm Beardmore & Steel Co of ScotlandTotal Heating Surface of Boilers 11,040 sq ftIs Forced Draft fitted YesNo. and Description of Boilers 4 Single EndedWorking Pressure 200 lbsTested by hydraulic pressure to 400 lbsDate of test 5.9.10No. of Certificate 436Can each boiler be worked separately YesArea of fire grate in each boiler 68.4 sq ft

No. and Description of Safety Valves to

each boiler double Acting loadedArea of each valve 11.0 sq inPressure to which they are adjusted 205 lbsAre they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 16"Mean dia. of boilers 15.7 1/2"Length 11.10 1/2"Material of shell plates SteelThickness 1 1/2"Range of tensile strength 38/32 tonsAre the shell plates welded or flanged NoDescrip. of riveting: cir. seams D.T. Rivlong. seams T.R.D.B.S.Diameter of rivet holes in long. seams 1 1/2"Pitch of rivets 10 1/2"Lap of plates or width of butt straps 23 1/2"

Per centages of strength of longitudinal joint

rivets 88.5%plate 84.8%Working pressure of shell by rules 234 lbsSize of manhole in shell 16" x 12"Size of compensating ring N^o 11.0No. and Description of Furnaces in each boiler 4 HarrisonMaterial SteelOutside diameter 43 1/4"

Length of plain part

top 39"

Thickness of plates

crown 39"Description of longitudinal joint weld

No. of strengthening rings

sides 41"Back 32"Top 64"Bottom 32"Working pressure of furnace by the rules 223Combustion chamber plates: Material SteelThickness: Sides 4 1/4"Back 3 1/2"Top 8 1/4"If stays are fitted with nuts or riveted heads NoWorking pressure by rules 200Pitch of stays to ditto: Sides 8 1/8" x 8 1/4"Back 6 1/4" x 7 1/4"Top 8 1/4" x 7 1/4"Material of stays SteelDiameter at smallest part 1 1/2"Area supported by each stay VariousWorking pressure by rules 218

End plates in steam space:

Material SteelThickness 1 1/2"Pitch of stays 15" x 15"How are stays secured O.N.T. 40Working pressure by rules 202Material of stays SteelDiameter at smallest part 2 1/2"Area supported by each stay 30 1/4"Working pressure by rules 209Material of Front plates at bottom SteelThickness 1"Material of Lower back plate SteelThickness 3 1/2"Greatest pitch of stays 13 1/2"Working pressure of plate by rules 219Diameter of tubes 2 1/2"Pitch of tubes 3 5/8" x 3 3/32"Material of tube plates SteelThickness: Front 6 3/4"Back 1 1/6"Mean pitch of stays 7 3/32"Pitch across wide water spaces 13 1/2"Working pressures by rules 201 lbsGirders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 9 1/2" x 2 @ 3/4"Length as per rule 33 1/6"Distance apart 8 1/4"Number and pitch of stays in each 3 @ 7 1/4"Working pressure by rules 202Superheater or Steam chest; how connected to boiler Yes

Can the superheater be shut off and the boiler worked

separately YesDiameter YesLength YesThickness of shell plates YesMaterial YesDescription of longitudinal joint Yes

Diam. of rivet

holes YesPitch of rivets YesWorking pressure of shell by rules YesDiameter of flue YesMaterial of flue plates YesThickness YesIf stiffened with rings YesDistance between rings YesWorking pressure by rules YesEnd plates: Thickness YesHow stayed YesWorking pressure of end plates YesArea of safety valves to superheater YesAre they fitted with easing gear Yes

Lloyd's Register

Foundation

W561-0135

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Descripti _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed and bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes. 1 propeller shaft complete: 2 propeller blades: 4 slide valve spindles: 2 sets of rings for

The foregoing is a correct description,
FOR WORKMAN, CLARK & CO., LIMITED

Manufacturer.

Dates { During progress of work in shops - - - - - } Mar. 1. 4. 10. 11. 14. 4. 10. 1. 14. 21. Apr. 4. 18. 24. 25. 31. June 3. 9. 15. 22. 30.
of Survey { During erection on board vessel - - - } Apr. 29. Oct. 4. 7. 10. 11. 12. 14. 15. 18. 19. 20. 21. 25. 26. 27. 28. 29.
while building { Total No. of visits - - - } 63

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 8. 8. 10 Slides 8. 8. 10 Covers 19. 8. 10 Pistons 29. 7. 10 Rods 29. 7.
Connecting rods 29. 7. 10 Crank shaft 29. 7. 10 Thrust shaft 11. 8. 10 Tunnel shafts 11. 8. 10 Screw shaft 26. 8. 10 Propeller 19. 8.
Stern tube 8. 9. 10 Steam pipes tested 13. 8. 10 Engine and boiler seatings 21. 9. 10 Engines holding down bolts 14. 10.
Completion of pumping arrangements 28. 10. 10 Boilers fixed 14. 10. 10 Engines tried under steam 29. 10. 10
Main boiler safety valves adjusted 25. 10. 10 Thickness of adjusting washers 7/16 to 1/2"
Material of Crank shaft Steel Identification Mark on Do. 297 Material of Thrust shaft Steel Identification Mark on Do. 29
Material of Tunnel shafts Steel Identification Marks on Do. 297 Material of Screw shafts Steel Identification Marks on Do. 29
Material of Steam Pipes wrought iron Test pressure 600 lbs per sq"

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery has been built under special survey: the material and workmanship being good, and satisfactorily tried under steam

It is submitted that above vessel is eligible for a record of + L. M. C. 10. 10 in the Register Book

It is submitted that
this vessel is eligible for
THE RECORD. + LMC. 10. 10.

F.D.

A. J. Thomas.

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee... £ 3. 0. 0 When applied for, 1-11-1910
Special ... £ 57. 16. 0
Donkey Boiler Fee ... £ : : When received, 4-11-1910
Travelling Expenses (if any) £ : :
TUE. 8 NOV 1910

Committee's Minute

Assigned

MACHINERY CERTIFICATE
WRITTEN.

(L)
VESSELS

These particulars are supplied

Signal Letters (if any)

Official Number.

129635

No., Date, and Port of Previous

Whether British or Foreign Built. Whether a and if a Steam

British

Number of Decks

Number of Masts

Rigged

Stern

Build

Galleries

Head

Framework and description

vessel

Number of Bulkheads

Number of water ballast

and their capacity in tons

Total to quarter the depth from waterline to bottom of keel

No. of sets of Engines.

Description of Engines.

Two

Inverted V Triple expansion surface

No. of Shafts.

Particulars of Shafts.

Two

Description of Shafts. Number Iron or Steel Loaded Pressure

Gross

Under Tonnage Decal

Space or spaces betw

Turret or Tank

Forecastle...

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart Houses

Spaces for machinery

Section 78 (2)

1894

Excess of Hatch

Gross

Deductions, as per

Register

NOTE.—The on

Bridge

Space betw

Poop

Passage

Name

No. of Ow

Name, Res

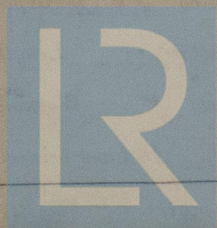
The Sta

French

man

Dated

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