

REPORT ON MACHINERY.

No. 24864

Port of Sunderland

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No. in Survey held at SunderlandDate, first Survey 10 Feb 1911Last Survey Aug 6th

1911

Reg. Book.

on the Steel Screw Steamer "Tolly"(Number of Visits 25)Master L. P. Larsen Built at AntwerpBy whom built Antwerp Dry Dock Co. Ltd. (1853) When builtEngines made at SunderlandBy whom made H. P. Marine Dry Dock Co. Ltd.when made 1911Boilers made at "By whom made "when made 1911

Registered Horse Power

Owners Dampskredskt VesterhavetPort belonging to EsbyergNom. Horse Power as per Section 28 82Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted NoENGINES, &c.—Description of Engines Vertical TripleNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 13 - 21 - 35Length of Stroke 27Revs. per minute 99

Dia. of Screw shaft

as per rule 8.26Material of steelIs the screw shaft fitted with a continuous liner the whole length of the stern tube No liner

Is the after end of the liner made water tight

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

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 —

If two

liners are fitted, is the shaft lapped or protected between the liners —Length of stern bush 2 - 10 1/2

Dia. of Tunnel shaft

as per rule 6.46

Dia. of Crank shaft journals

as per rule 4.1Dia. of Crank pin 4 1/4Size of Crank webs 4 5/8 x 10 1/2

Dia. of thrust shaft under

collars 7 1/4Dia. of screw 10 - 0Pitch of Screw 10 - 6No. of Blades 4State whether moveable —Total surface 34 1/2No. of Feed pumps 2Diameter of ditto 2 1/4Stroke 15Can one be overhauled while the other is at work YesNo. of Bilge pumps 2Diameter of ditto 2 1/4Stroke 15Can one be overhauled while the other is at work YesNo. of Donkey Engines 2Sizes of Pumps 4 1/2 x 2 3/4 x 46 x 6 x 6

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

In Engine Room Three of 2"In Holds, &c. Four of 2"No. of Bilge Injections 1sizes 3Connected to condenser, or to circulating pump PumpIs a separate Donkey Suction fitted in Engine room & size Yes 2 1/4"Are 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 None fittedAre 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 engine roomAre the Discharge Pipes above or below the deep water line AboveAre 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 —Are 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 13-7-11of Stern Tube 13-7-11Screw shaft and Propeller 13-7-11Is the Screw Shaft Tunnel watertight YesIs it fitted with a watertight door Yesworked from Platform in Engine room above main deckBOILERS, &c.—(Letter for record S.)Manufacturers of Steel J. Spencer & Son Ltd. NewcastleTotal Heating Surface of Boilers 4284Is Forced Draft fitted NoNo. and Description of Boilers 2 S.P. horizontalWorking Pressure 180Tested by hydraulic pressure to 360Date of test 25-4-11No. of Certificate 2907Can each boiler be worked separately YesArea of fire grate in each boiler 22 ft²

No. and Description of Safety Valves to

each boiler 2 Direct SpringArea of each valve 3.14Pressure to which they are adjusted 185 lbs.Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 18"Mean dia. of boilers 9 - 4 1/2Length 9 - 0Material of shell plates SteelThickness 3/32Range of tensile strength 28 1/2 - 32Are the shell plates welded or flanged NoDescrip. of riveting: cir. seams St Laplong. seams St LapDiameter of rivet holes in long. seams 1"Pitch of rivets 7"Lap of plates or width of butt straps 16 1/2

Per centages of strength of longitudinal joint

rivets 85.46plate 85.71Working pressure of shell by rules 180.2Size of manhole in shell End 16 x 12Size of compensating ring DishedNo. and Description of Furnaces in each boiler 2 MorrisonMaterial —Outside diameter 32 1/4

Length of plain part

top —

Thickness of plates

crown 7/16Description of longitudinal joint weld

No. of strengthening rings

Working pressure of furnace by the rules 183Combustion chamber plates: Material —Thickness: Sides 3/4Back 3/8Top 3/4Bottom 3/4Pitch of stays to ditto: Sides 12 1/2 x 7 1/2Back 11 x 10 1/2Top 7 1/2 x 12 1/2If stays are fitted with nuts or riveted heads NutsWorking pressure by rules 199Material of stays —Diameter at smallest part 1.63Area supported by each stay 94.6Working pressure by rules 200

End plates in steam space:

Material —Thickness 15Pitch of stays 12 x 14 1/2How are stays secured On HWWorking pressure by rules 181Material of stays —Diameter at smallest part 2.28Area supported by each stay 213.0Working pressure by rules 200Material of Front plates at bottom —Thickness 15Material of Lower back plate SteelThickness 15Greatest pitch of stays 4 1/2 x 10 1/2Working pressure of plate by rules 88Diameter of tubes 3 1/2Pitch of tubes 4 1/2 x 4 1/2Material of tube plates —Thickness: Front 15Back 3Mean pitch of stays 10 1/2Pitch across wide water spaces 14Working pressures by rules 183Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 7 1/2 x 18Length as per rule 26 1/2Distance apart 12 1/2Number and pitch of stays in each 2 7 1/2Working pressure by rules 183Superheater or Steam chest; how connected to boiler —

Can the superheater be shut off and the boiler worked

separately —

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

—

—

—

—

—

—

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 _____ Description of Safety _____

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 _____ Rivets _____ Plates _____

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:— 1 propeller 2 each of main bearing + top + bottom end bolts, 6 main shaft coupling bolts, 1 slide valve rod, 1 air pp rod, set of valves for air + circulating pumps, 1 set of pump for the H.P. piston, 2 span feed + bilge pump valves, 1 set of safety valve springs, 5 boiler tubes, 12 condenser tubes + a quantity of bolts + nuts + plates + bars of various sizes.

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO LTD

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1911 Feb. 10. Mar. 6. 9. 14. 27. 30. Apr. 4. 10. 20. 24. 25. May 1. 9. 15. 22. 25. 29. = 17
During erection on board vessel - 1911 June 23. 28, July 6-13-19-26 Aug 4-6 = 8
Total No. of visits 25.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 9-3-11 Slides 9-5-11 Covers 1-5-11 Pistons 1-5-11 Rods
Connecting rods 9-5-11 Crank shaft 24-3-11 Thrust shaft 3-4-11 Tunnel shafts 22-5-11 Screw shaft 25-5-11 Propeller 29-5-11
Stern tube 29-5-11 Steam pipes tested 4-8-11 Engine and boiler seatings 19-7-11 Engines holding down bolts 26-7-11
Completion of pumping arrangements 6-8-11 Boilers fixed 19-7-11 Engines tried under steam 6-8-11
Main boiler safety valves adjusted 6-8-11 Thickness of adjusting washers F 0 1/2" Port boiler 3" Start boiler 0 1/2" 0 1/2"
Material of Crank shaft Hypo Identification Mark on Do. 7870N Material of Thrust shaft Hypo Identification Mark on Do. 57B
Material of Tunnel shafts 6 { 302044 64MB 29644 39MB Identification Marks on Do.
Material of Screw shafts " Identification Marks on Do. 3021
Material of Steam Pipes Copper Test pressure 360 lbs per sq inch.

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

The machinery of this vessel has been constructed under special survey, the material and workmanship found good and efficient, and the boiler tested in accordance with the rules.

The machinery has been shipped to Antwerp where the survey will be completed.

The fitting of the engines + boilers examined, + together with the auxiliary machinery tried under working conditions, + found satisfactory + is now eligible in my opinion for the record of + L.M.C. 7-11 in the Register Book

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.11.

The amount of Entry Fee.. £ 1 : 0 :
Special .. £ 12 : 6 :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
1/3 the Antwerp (L.H. 2.0)

When applied for,

36-19-11

When received,

16/6/11

Committee's Minute

Assigned

FRI AUG 25 1911

Thmc 8.11

E. J. Stoddart + A. E. Larminier & Co
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

E. J. Wilvers.

MACHINERY CERTIFICATE
WRITTEN



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Foundation