

REPORT ON MACHINERY.

No. 28225

Received at London Office

TUE. JAN. 26. 1915

Date of writing Report 1-1-15 When handed in at Local Office 1/1 15 Port of Hull
 To in Survey held at Hull Date, First Survey 15-1-14 Last Survey 31-12-14 19
 Reg. Book. 29 on the Hull screw trawler Laipo (No 2506) (Number of Plates 45) Tons { Gross 247
 { Net 119
 Master Lilby Built at Lilby By whom built Cochrane Bros Ltd When built 1914-12
 Engines made at Hull By whom made Amos & Smith Ltd when made 1914-12
 Boilers made at Hull By whom made Amos & Smith Ltd when made 1914-12
 Registered Horse Power 79 Owners H. D. Taylor Port belonging to Grimsby
 Nom. Horse Power as per Section 28 79 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders three No. of Cranks 3
 No. of Cylinders 12 1/2 - 2 1/2 - 35 1/2 Length of Stroke 24" Revs. per minute as per rule 7.2" Material of Iron
 as fitted 7 1/2" screw shaft
 Is 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
 Is 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 yes Length of stern bush 2'-9"
 Dia. of Tunnel shaft as per rule 6.41" Dia. of Crank shaft journals as per rule 6.73" Dia. of Crank pin 7" Size of Crank webs 3 3/4" x 4 3/4" Dia. of thrust shaft under
 collars 7" Dia. of screw 8'-9" Pitch of Screw 11'-3" No. of Blades 4 State whether moveable no Total surface 30 ft
 No. of Feed pumps one Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Bilge pumps one Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Donkey Engines one & 2 1/2" Sizes of Pumps 6 1/2" x 4 3/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room Two 2" dia In Holds, &c. one 2" in each compartment
all suction also connected to engine
 No. of Bilge Injections one size 3" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
 What pipes are carried through the bunkers Forward suction How are they protected Work casing
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Dates of examination of completion of fitting of Sea Connections 21-9-14 of Stern Tube 21-9-14 Screw shaft and Propeller 21-9-14
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes
 BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix Abt Hinder Verein Hörde
 Total Heating Surface of Boilers 1400 Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 300 lbs Date of test 1-12-14 No. of Certificate 3046
 Can each boiler be worked separately yes Area of fire grate in each boiler 40.5 No. and Description of Safety Valves to
 each boiler two spring loaded Area of each valve 4.9 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 40.9" Mean dia. of boilers 13'-0" Length 10'-2" Material of shell plates Steel
 Thickness 1 3/8" Range of tensile strength 29-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams R & B Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7.63" Top of plates as width of butt straps 16 1/2"
 Per centages of strength of longitudinal joint 94 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"
 Size of compensating ring 9" x 1 3/8" No. and Description of Furnaces in each boiler Three plain Material S Outside diameter 37 1/2"
 Length of plain part top 7' 8" Thickness of plates bottom 3 3/4" Description of longitudinal joint welded No. of strengthening rings one
 Working pressure of furnace by the rules 196 Combustion chamber plates: Material S Thickness: Sides 1 1/6" Back 1 1/6" Top 1 1/6" Bottom 1 1/6"
 Pitch of stays to ditto: Sides 9 1/2" x 7" Back 9 1/2" x 8 1/2" Top 9" x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 204
 Material of stays S Diameter at smallest part 1 7/8" Area supported by each stay 66.5 Working pressure by rules 212 End plates in steam space
 Material S Thickness 1 3/8" Pitch of stays 18" x 1 1/2" How are stays secured R & W Working pressure by rules 180 Material of stays S
 Diameter at smallest part 6' 10" Area supported by each stay 315 Working pressure by rules 201 Material of Front plates at bottom S
 Thickness 1" Material of Lower back plate S Thickness 5/16" Greatest pitch of stays 14 7/8" x 9" Working pressure of plate by rules 206
 Diameter of tubes 3 1/2" Pitch of tubes 5" x 4 3/4" Material of tube plates S Thickness: Front 1" Back 2 3/32" Mean pitch of stays 9 3/4"
 Pitch across wide water spaces 14 5/8" Working pressures by rules 180 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 9" x 1 3/4" Length as per rule 33" Distance apart 9" Number and pitch of stays in each Three 7"
 Working pressure by rules 196 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked
 separately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet
 holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes
 Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:-

Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed bilge & air pump valves & a quantity of bolts & nuts & nuts of various sizes

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

W. H. H. H.

Manufacturer.

Managing Director

Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - - -
Total No. of visits

1914 - Jan 15, Jan 12, July 3, 12, 31, Aug 20, 21, 24, 26, 28, Sept 1, 9, 15
16, 18, 21, 23, 25, 29, Oct 1, 7, 9, 14, 20, 23, 27, 29, Nov 4, 5, 11, 13, 16, 18, 24, 28, Dec 1, 3, 14, 15
16, 18, 21, 24, 31

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 20-11-14 Slides 1-12-14 Covers 24-11-14 Pistons 24-11-14 Rods 18-11-14
Connecting rods 18-11-14 Crank shaft 18-11-14 Thrust shaft 4-11-14 Tunnel shafts ✓ Screw shaft 18-9-14 Propeller 18-9-14
Stern tube 18-9-14 Steam pipes tested 18-12-14 Engine and boiler seatings 21-9-14 Engines holding down bolts 21-12-14
Completion of pumping arrangements 31-12-14 Boilers fixed 21-12-14 Engines tried under steam 31-12-14
Main boiler safety valves adjusted 24-12-14 Thickness of adjusting washers 10 7/16 1 3/8

Material of Crank shaft Steel Identification Mark on Do. 1392 FLS Material of Thrust shaft Steel Identification Mark on Do. 1367 FLS

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1267 FLS

Material of Steam Pipes Solid drawn copper ✓ Test pressure 400 lbs ✓

Is an installation fitted for burning oil fuel no ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case no ✓ If so, state name of vessel ✓

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

The machinery of this vessel has been constructed under special survey in accordance with the approved plan & the rules of this society the materials & workmanship are good. The boiler & steam pipes have been tested as above & found sound & good. The machinery has been properly fitted & secured on board & on completion was tried under steam & found to work satisfactorily. The safety valves have been adjusted under steam & tried for accumulation which did not exceed 192 lbs.

In my opinion the vessel is eligible for the record & L.M.C. 12, 14.

It is submitted that this vessel is eligible for THE RECORD & L.M.C. 12, 14.

The amount of Entry Fee £ 1 : 0 :
Special £ 11 : 17 :
Donkey Boiler Fee £
Travelling Expenses (if any) £ : 8 : 2

When applied for,

25/11/15

When received,

30/11/15

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

Committee's Minute

FRI. JAN. 29. 1915

Assigned

+ L.M.C. 12, 14



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