

REPORT ON MACHINERY.

No. 29123

Received at London Office THU. 10 FEB. 1916

of writing Report 6-1-16 When handed in at Local Office 6-1-16 Port of Hull
 in Survey held at Hull Date, First Survey 15-6-15 Last Survey 3-1-16
 Book. 10 on the steel screw trawler Night Hawk (No 1106) (Number of Visits 43)
 Tons { Gross 307
 Net 150
 When built 1916-1
 Built at Leby By whom built Cochrane & Sons Ltd
 Engines made at Hull By whom made C.D. Holmes & Co Ltd when made 1916-1
 Meters made at Hull By whom made C.D. Holmes & Co Ltd when made 1916-1
 Registered Horse Power 88 Owners Pioneer Trawling Co Ltd Port belonging to Grimsby
 m. Horse Power as per Section 28 88 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 GINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3
 a. of Cylinders 13 1/2 - 23 - 37 Length of Stroke 26 Revs. per minute 7.77 Dia. of Screw shaft 8 Material of Iron
 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
 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 35 1/2
 Dia. of Tunnel shaft 6.91 Dia. of Crank shaft journals 7.25 Dia. of Crank pin 7 1/2 Size of Crank webs 4 1/2 x 14 1/2 Dia. of thrust shaft under
 collars 7 1/2 Dia. of screw 9-6 Pitch of Screw 11-3 No. of Blades 4 State whether moveable no Total surface 34 1/2
 No. of Feed pumps one Diameter of ditto 2 1/2 Stroke 14 3/4 Can one be overhauled while the other is at work yes
 No. of Bilge pumps one Diameter of ditto 2 1/2 Stroke 14 3/4 Can one be overhauled while the other is at work yes
 No. of Donkey Engines one Sizes of Pumps 6" x 4 1/2" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room Two 2" dia In Holds, &c. one 2" dia in each compartment
 all suction also connected to ejector
 No. of Bilge Injections one sizes 3 1/2 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2 1/2 ejector
 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 no
 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 Food suction How are they protected strong wooden 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 30-7-15 of Stern Tube 30-7-15 Screw shaft and Propeller 6-8-15
 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 Stewart & Lloyd
 Total Heating Surface of Boilers 1540 Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 12-10-15 No. of Certificate 3105
 Can each boiler be worked separately yes Area of fire grate in each boiler 46.8 sq ft 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 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 15 Mean dia. of boilers 165 3/4 Length 10-9 Material of shell plates steel
 Thickness 1 1/8 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams J.R.D.B. 1 Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 8 Lap of plates or width of butt straps 18
 Per centages of strength of longitudinal joint 86.6 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1 1/8" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 39"
 Length of plain part 78 1/2 Thickness of plates 3 3/4 Description of longitudinal joint welded No. of strengthening rings yes
 Working pressure of furnace by the rules 188 Combustion chamber plates: Material steel Thickness: Sides 1 1/16 Back 2 3/32 Top 1 1/16 Bottom 1 1/16
 Pitch of stays to ditto: Sides 9 1/2 x 9 1/2 Back 10 1/2 x 8 3/4 Top 11 x 9 1/2 Bottom 11 x 9 1/2 Are stays fitted with nuts or riveted heads nuts Working pressure by rules 181
 Material of stays steel Diameter at smallest part 2 1/4 Area supported by each stay 107 Working pressure by rules 202 End plates in steam space:
 Material steel Thickness 1 1/4 Pitch of stays 21 x 19 How are stays secured J.R.D.B. Working pressure by rules 185 Material of stays steel
 Diameter at smallest part 7.5 Area supported by each stay 400 Working pressure by rules 195 Material of Front plates at bottom steel
 Thickness 1 Material of Lower back plate steel Thickness 7/8 Greatest pitch of stays 14 x 19 3/8 Working pressure of plate by rules 199
 Diameter of tubes 3 1/2 Pitch of tubes 5 1/8 x 4 3/4 Material of tube plates steel Thickness: Front 1 Back 7/8 Mean pitch of stays 9 1/2
 Pitch across wide water spaces 13 3/4 Working pressures by rules 190 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 11 1/4 x 1 3/4 Length as per rule 39 Distance apart 11 1/4 Number and pitch of stays in each three 9 1/2
 Working pressure by rules 187 lbs Superheater or Steam chest; how connected to boiler 9 1/2 wing 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 union 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 air, fuel & bilge pump valves, one main & one donkey check valve & a quantity of bolts & nuts kind of various sizes.*

The foregoing is a correct description,

D. PRO CHARLES D. HOLMES & CO. LTD.

David Sheardson DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *1915:— Jun 15, 16 Jul 23, 27, 28, 30 Aug 6, 10, 13, 18, 25, 26, 29, Sep 7, 10, 14, 15, 20, 22, 24, 27, 28, 30, 1916*
{ During erection on board vessel - - - } *Oct 1, 5, 8, 11, 12, 14, 19, 25, 27, 29, Nov 2, 5, 11, 19, 23, 26 Dec 7, 9, 21, 31, Jan 3*
Total No. of visits *43*

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " " *✓*

Dates of Examination of principal parts:— Cylinders *20-9-15* Slides *2-11-15* Covers *25-10-15* Pistons *11-10-15* Rods *19-10-15*
Connecting rods *27-10-15* Crank shaft *19-10-15* Thrust shaft *18-8-15* Tunnel shafts *✓* Screw shaft *6-8-15* Propeller *6-8-15*
Stern tube *27-7-15* Steam pipes tested *9-12-15* Engine and boiler seatings *30-7-15* Engines holding down bolts *7-12-15*
Completion of pumping arrangements *3-1-16* Boilers fixed *7-12-15* Engines tried under steam *3-1-16*
Main boiler safety valves adjusted *21-12-15* Thickness of adjusting washers *Both 3/8*

Material of Crank shaft *Iron* Identification Mark on Do. *1535FL8* Material of Thrust shaft *Iron* Identification Mark on Do. *7235824*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *1516FLS*

Material of Steam Pipes *solid drawn copper* Test pressure *40 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 *yes* If so, state name of vessel *Lumber*

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 plans & the rules of this society, the materials & workmanship are good. The boiler & steam pipes have been tested as above & found sound & tight. The machinery has been properly fitted & secured on board & on completion was tested under full working conditions & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 192 lbs.*

In my opinion the vessel is eligible for the next + L.M.C 1-16

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C 1-16

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 13 : 4 :
Donkey Boiler Fee ... £
Travelling Expenses (if any) £ 8/2 :
When applied for, *9-2-1916*
When received, *29-2-1916*

Frank A. Sturges
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute *TUE 15 FEB 1916*

Assigned *+ L.M.C 1-16*

MACHINERY CERTIFICATE
WRITTEN



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Foundation