

REPORT ON MACHINERY.

No. 14957

FRID. 17 OCT 1902

Port of Stull

Received at London Office _____ 19

No. in Survey held at Stull Date, first Survey Jan 21st Last Survey Oct. 16th 1902
 Reg. Book. 18 Sup. on the Steam Trawler Mackenzie (Number of Visits 44)
 Master _____ Built at Stull By whom built Lock William Tennant When built 1902
 Engines made at Stull By whom made Chas & Holmes Ltd when made 1902
 Boilers made at Stull By whom made Chas & Holmes Ltd when made 1902
 Registered Horse Power _____ Owners Nepheue Steam Fishing Co. Ltd Port belonging to Stull
 Nom. Horse Power as per Section 28 81 Is Refrigerating Machinery fitted No Is Electric Light fitted No

Tons { Gross 256
 Net 93

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 13" 22" 36" Length of Stroke 27 Revs. per minute 112 Dia. of Screw shaft 7.53" Material of screw shaft Iron
 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 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 - If two liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 32 1/2"
 Dia. of Tunnel shaft 6.85" Dia. of Crank shaft journals 7.2" Dia. of Crank pin 7 7/8" Size of Crank webs 14 1/2" x 5 7/8" Dia. of thrust shaft under collars 7 3/8" Dia. of screw 9.0" Pitch of screw 12.0 & 11.0 No. of blades 4 State whether moveable No Total surface 28 1/2 sq ft
 No. of Feed pumps one Diameter of ditto 2 3/8" Stroke 16" Can one be overhauled while the other is at work -
 No. of Bilge pumps one Diameter of ditto 2 3/8" Stroke 16" Can one be overhauled while the other is at work -
 No. of Donkey Engines one Sizes of Pumps 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room two 2" In Holds, &c. three 2"
Ejector suction in Engine Bilge & hold and discharge on deck.
 No. of bilge injections one sizes 3" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size 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 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 Suctions to forward How are they protected hard coiled
 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
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Jan 21 Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door - worked from -

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1370 sq ft Is forced draft fitted No
 No. and Description of Boilers One Cylindrical Working Pressure 180 lb Tested by hydraulic pressure to 360 lb
 Date of test 1/7/02 Can each boiler be worked separately - Area of fire grate in each boiler 32 sq ft No. and Description of safety valves to each boiler Two Spring Area of each valve 3.98 Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean dia. of boilers 12.9" Length 10.6" Material of shell plates Steel
 Thickness 1 1/16" Range of tensile strength 29532 Are they welded or flanged - Descrip. of riveting: cir. seams All on 1 1/4" long seams All on 1 1/4"
 Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 6 7/8" Lap of plates or width of butt straps 15"
 Per centages of strength of longitudinal joint rivets 90% Working pressure of shell by rules 186 lb Size of manhole in shell 16" x 12"
 Size of compensating ring 6" x 1 1/16" No. and Description of Furnaces in each boiler two bottom Material Steel Outside diameter 44"
 Length of plain part 14 1/2" Thickness of plates 1 1/16" Description of longitudinal joint beaded No. of strengthening rings 4
 Working pressure of furnace by the rules 187 lb Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 1 1/16" Top 1 1/16" Bottom 23/32"
 Pitch of stays to ditto: Sides 9" Back 9 1/4" Top 9" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 195 lb
 Material of stays Steel Diameter at smallest part 1 7/8" Area supported by each stay 9 1/2" x 9 7/8" Working pressure by rules 227 lb End plates in steam space: Material Steel Thickness 1 1/16" Pitch of stays 17" How are stays secured All nut Working pressure by rules 185 lb Material of stays Steel
 Diameter at smallest part 2 1/4" Area supported by each stay 17" x 17" Working pressure by rules 219 lb Material of Front plates at bottom Steel
 Thickness 1 7/16" Material of Lower back plate Steel Thickness 1 7/16" Greatest pitch of stays 15" Working pressure of plate by rules 180 lb
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 1 7/16" Back 29/32" Mean pitch of stays 9 1/4"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 180 lb Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 9" x 13 1/4" Length as per rule 33" Distance apart 8 1/2" Number and pitch of Stays in each two 9"
 Working pressure by rules 220 lb Superheater 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 _____

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?

2000-7-02-Copyrighted Ink.

W836 - 0034

DONKEY BOILER— No. _____ Description *None*

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

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____

Plates _____ Dia. of stays. _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

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

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *The top end bolts. Two bottom end bolts. Two main leaning bolts. One set coupling bolts. One set feed pump valves. One set Bilge pump valves. One set check valves. Safety valve spring. The vessel efficient with masts and keel as a boiler.*

The foregoing is a correct description,
Charles D. Holmes Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1902:— Jan 21. Feb 3, 10, 17, 20, 26 Mar. 1, 3, 12, 14, 18, 21, 27 Apr. 3, 10, 17, 23, 25 May 1, 6, 8, 14, 23, 27.
 { During erection on board vessel - - Jun 2, 5, 10, 19 July 1, 8, 29 Aug 6, 19 Sep 12, 15, 17, 22, 24, 30 Oct 2, 7, 8, 14, 16.
 Total No. of s *44* Is the approved plan of main boiler forwarded herewith *Yes*

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

The Machinery and Boiler of this Steam Trawler have been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the certification + L M C 10.02. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD - L M C 10.02

17.10.02
17.10.02

Certificate (if required) to be sent to Hull

The amount of Entry Fee... £ 1 : - : - : When applied for, 13/10/02
 Special ... £ 12 : 3 : - :
 Donkey Boiler Fee ... £ - : - : - :
 Travelling Expenses (if any) £ - : - : - : When received, 21.10.02

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

Committee's Minute **TUES. 21 OCT 1902**

Assigned *+ L M C 10.02*

MACHINERY CERTIFICATE WRITTEN

