

REPORT ON MACHINERY.

Cups No. 27

FEB. 10 JAN 1905

Port of Grimsby Received at London Office _____
 Date, first Survey Oct: 14/4 Last Survey January 1904
 No. in Survey held at Grimsby (Number of Visits 17)
 Book. _____
 Name of the Steel Screw Trawler "LEO" (ex Dispatch) Gross Tons 180
 Net Tons 60
 Master B. Gilding Built at Selby By whom built Cochran & Sons (No. 333) When built 1904
 Engines made at Grimsby By whom made Gt. Central Co-op. Eng. & M. Co. when made 1904
 Boilers made at West Hutterford By whom made Central Marine Eng. Works when made 1904
 Registered Horse Power _____ Owners Gt. North Sea Steam Trawling Co. Ltd. Port belonging to Grimsby
 Horse Power as per Section 28 57 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c.—Description of Engines 3 No. of Cylinders 3 No. of Cranks 3
 of Cylinders 1 1/2, 1 1/2, 30 Length of Stroke 22 Revs. per minute 120 Dia. of Screw shaft as per _____ Lgth. of stern bush 2-3
 of Tunnel shaft as per rule 50 Dia. of Crank shaft journals as per rule 6 1/2 Dia. of Crank pin 6 1/4 Size of Crank webs 7 1/2 x 1 1/2 Dia. of thrust shaft under _____
 of shafts 6 1/4 Dia. of screw 8-0 Pitch of screw 10-0 No. of blades 4 State whether moveable no Total surface 23 1/2
 of Feed pumps 1 Diameter of ditto 2 1/4 Stroke 11 Can one be overhauled while the other is at work _____
 of Bilge pumps 1 Diameter of ditto 3 Stroke 11 Can one be overhauled while the other is at work _____
 of Donkey Engines 1 Sizes of Pumps 2 1/2 Ran. 5 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps _____
 Engine Room Sea bilge & Hotwell 2 bore in Holds, &c. Fore hold suction
Fore peak suction 2 bore
 of bilge injections 1 sizes 2 1/4 Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size 6 inches 2 1/2
 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
 all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both
 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
 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
 at pipes are carried through the bunkers Fore room & fore peak suction How are they protected Strong wood casing
 all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes
 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 new Is the screw shaft tunnel watertight no tunnel
 it fitted with a watertight door _____ worked from _____

BOILERS, &c.— (Letter for record _____) Total Heating Surface of Boilers _____ Is forced draft fitted _____
 and Description of Boilers _____ Working Pressure _____ Tested by hydraulic pressure to _____
 No. of test _____ Can each boiler be worked separately _____ Area of fire grate in each boiler _____ No. and Description of safety valves to _____
 boiler _____ Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 least distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers _____ Length _____ Material of shell plates _____
 thickness _____ Range of tensile strength _____ Are they welded or flanged _____ Descrip. of riveting: cir. seams _____ long. seams _____
 diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
 percentages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____
 No. of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
 length of plain part _____ Thickness of plate _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 pitch of stays to ditto: Sides _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____ End plates in steam space: _____
 Material of stays _____ Diameter of smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of stays _____
 Material of stays _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
 diameter of smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
 thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
 diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
 pitch across side water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and _____
 thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of Stays in each _____
 Working pressure by rules _____ Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked _____
 Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet _____
 Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____
 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 _____



Lloyd's Register Foundation
W1503-0170

DONKEY BOILER— No. Description

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. _____

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:— 2 each of top & bottom end main bearing bolts. One set coupling bolts. One set each of feed bilge air ventilation & donkey pump valves, main & donkey feed check valves, Condenser boiler tubes, safety valve spring, Balloons, screwed bars etc.

The foregoing is a correct description,
Manufacturer.

For the GREAT CENTRAL CO-OPERATIVE
ENGINEERING & SHIP REPAIRING COMPANY, LTD.

Fred Hyster

Dates of Survey while building { During progress of work in shops - - 1904. Oct: 1, 6, 20, 22, 28. Nov: 8, 9, 11, 22, 26. Dec: 15, 17, 19. 1905. Jan: 2. }
Total No. of visits 17.

Secretary, Dec: 26, 12.

Is the approved plan of main boiler forwarded herewith *Yes.*
" " " donkey " " " "

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

Material of screw shaft *Serpent* 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

This machinery has been constructed under special survey, the materials & workmanship being good; it has been securely fastened on board the vessel and tried under steam, and is in my opinion eligible for record of + R.M.C. 1.05 (i red)

It is submitted that
this vessel is eligible for
THE RECORD **† L.M.C. 1.05.**

Emd.

10.1.05

This office used

Certificate (if required) to be sent to _____

The amount of Entry Fee... £ 1 : 0 0 When applied for,
Special ... £ 8 11 0
Donkey Boiler Fee ... £ 9 11 0
Boiler Fee at 1/2% ... £ 2 : 16 0
Committee's Minute ... £ 6 : 15 0

When received, 31 5 15 5

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

FRI. JAN 13 1905

Assigned

+ L.M.C. 1.05

MACHINERY CERTIFICATE
WRITTEN.



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Foundation

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No. of
Whether
Foreign
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