

REPORT ON MACHINERY.

Port of Grimby

Received at London Office THUR. 17 MAY 1906

No. in Survey held at Grimby Date, first Survey 20 October 05 Last Survey 27 April 1906
 Reg. Book. 101 on the Steam Trawler "ARIES" (Number of Visits 32)
 Master S. Firth Built at Seelby By whom built Cochrane & Sons Tons Gross 250
Net 103
 Engines made at Grimby By whom made G. Central Co-op. Eng. Co. Ltd. when made 1906
 Boilers made at Hartlepool By whom made Central Marine Eng. Co. Ltd. when made 1906
 Registered Horse Power 76 Owners Jas. Scott Sea Steam Trawling Co. Ltd. belonging to Grimby
 Nom. Horse Power as per Section 28 76 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

Inspected 17th May 1906

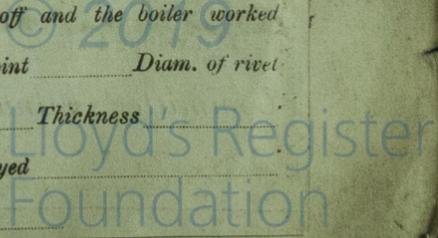
ENGINES, &c.—Description of Engines Triple Expansion Surf. Cond. No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 12 1/4 22 35 Length of Stroke 24 Revs. per minute 108 Dia. of Screw shaft 7 1/2 Material of screw shaft Iron
 Is the screw shaft fitted with a continuous liner the whole length of the 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 Yes
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 36
 Dia. of Tunnel shaft 7 1/2 Dia. of Crank shaft journals 6 7/8 Dia. of Crank pin 7 Size of Crank webs 13 x 4 1/4 Dia. of thrust shaft under collars 7 1/2
 Dia. of screw 8-6 Pitch of Screw 11-0 No. of Blades 4 State whether moveable no Total surface 28 1/2
 No. of Feed pumps 1 Diameter of ditto 2 1/4 Stroke 12 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 3 Stroke 12 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 3 1/2 x 6 stroke No. and size of Suctions connected to both Bilge and Donkey pumps 2 bore
 In Engine Room Sea bilge & hotwell 2 bore In Holds, &c. Fish rooms 2 bore
 No. 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 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 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 Fish room & 2 W tank suction How are they protected Wood & iron casings
 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 Mar 12th of Stern Tube Mar 12th Screw shaft and Propeller Mar 12/06
 Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record particulars as per report here with) Manufacturers of Steel particulars as per report here with

Total Heating Surface of Boilers particulars as per report here with Is Forced Draft fitted no and Description of Boilers particulars as per report here with
 Working Pressure particulars as per report here with Tested by hydraulic pressure to particulars as per report here with Date of test particulars as per report here with No. of Certificate particulars as per report here with
 Can each boiler be worked separately particulars as per report here with Area of the grate in each boiler particulars as per report here with No. and Description of Safety Valves to each boiler particulars as per report here with
 Area of each valve particulars as per report here with Pressure to which they are adjusted particulars as per report here with Are they fitted with easing gear particulars as per report here with
 Smallest distance between boilers or uptakes and bunkers or woodwork particulars as per report here with Mean dia. of boilers particulars as per report here with Length particulars as per report here with Material of shell plates particulars as per report here with
 Thickness particulars as per report here with Range of tensile strength particulars as per report here with Are the shell plates welded or flanged particulars as per report here with Descrip. of riveting: cir. seams particulars as per report here with
 long. seams particulars as per report here with Diameter of rivet hole in long. seams particulars as per report here with Pitch of rivets particulars as per report here with Lap of plates or width of butt straps particulars as per report here with
 Per centages of strength of longitudinal joint particulars as per report here with Working pressure of shell by rules particulars as per report here with Size of manhole in shell particulars as per report here with
 Size of compensating ring particulars as per report here with No. and Description of Furnaces in each boiler particulars as per report here with Material particulars as per report here with Outside diameter particulars as per report here with
 Length of plain part particulars as per report here with Thickness of plates particulars as per report here with Description of longitudinal joint particulars as per report here with No. of strengthening rings particulars as per report here with
 Working pressure of furnace by the rules particulars as per report here with Combustion chamber plates: Material particulars as per report here with Thickness: Sides particulars as per report here with Back particulars as per report here with Top particulars as per report here with Bottom particulars as per report here with
 Pitch of stays to ditto: Sides particulars as per report here with Back particulars as per report here with Top particulars as per report here with If stays are fitted with nuts or riveted heads particulars as per report here with Working pressure by rules particulars as per report here with
 Material of stays particulars as per report here with Diameter at smallest part particulars as per report here with Area supported by each stay particulars as per report here with Working pressure by rules particulars as per report here with End plates in steam space: particulars as per report here with
 Material particulars as per report here with Thickness particulars as per report here with Pitch of stays particulars as per report here with How are stays secured particulars as per report here with Working pressure by rules particulars as per report here with Material of stays particulars as per report here with
 Diameter at smallest part particulars as per report here with Area supported by each stay particulars as per report here with Working pressure by rules particulars as per report here with Material of Front plates at bottom particulars as per report here with
 Thickness particulars as per report here with Material of Lower back plate particulars as per report here with Thickness particulars as per report here with Greatest pitch of stays particulars as per report here with Working pressure of plate by rules particulars as per report here with
 Diameter of tubes particulars as per report here with Pitch of tubes particulars as per report here with Material of tube plates particulars as per report here with Thickness: Front particulars as per report here with Back particulars as per report here with Mean pitch of stays particulars as per report here with
 Pitch across wide water spaces particulars as per report here with Working pressures by rules particulars as per report here with Girders to Chamber tops: Material particulars as per report here with Depth and thickness of girder at centre particulars as per report here with
 Length as per rule particulars as per report here with Distance apart particulars as per report here with Number and pitch of stays in each particulars as per report here with
 Working pressure by rules particulars as per report here with Superheater or Steam chest; how connected to boiler particulars as per report here with Can the superheater be shut off and the boiler worked separately particulars as per report here with
 Diameter particulars as per report here with Length particulars as per report here with Thickness of shell plates particulars as per report here with Material particulars as per report here with Description of longitudinal joint particulars as per report here with Diam. of rivet holes particulars as per report here with
 Pitch of rivets particulars as per report here with Working pressure of shell by rules particulars as per report here with Diameter of flue particulars as per report here with Material of flue plates particulars as per report here with Thickness particulars as per report here with
 If stiffened with rings particulars as per report here with Distance between rings particulars as per report here with Working pressure by rules particulars as per report here with End plates: Thickness particulars as per report here with How stayed particulars as per report here with
 Working pressure of end plates particulars as per report here with Area of safety valves to superheater particulars as per report here with Are they fitted with easing gear particulars as per report here with

If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship



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:— *Two each of top & bottom end & main bearing bolts, one set coupling bolts, one set each of air circulating feed & bilge pump valves, main & auxiliary feed check valves, stud iron bolts nuts, condensers tubes.*

The foregoing is a correct description,

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

Manufacturer.

John D. Lister

Dates of Survey while building	During progress of work in shops—	1905:— Oct 20, 27, 28, 29, 30, 31	Nov 2, 10, 14, 18, 22, 28	Dec 8, 14, 21, 1906:— Jan 1, 1906
	During erection on board vessel—	April 6:— 10, 11, 17, 19, 20, 21, 24, 26, 27	Feb 6, 21, 22, 23	Mar 19
	Total No. of visits	32		

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

Dates of Examination of principal parts—	Cylinders	27/10/05	Slides	27/10/05	Covers	27/10/05	Pistons	31/1/06	Rods	10/11/05	
Connecting rods	10/11/05	Crank shaft	2/12/05	Thrust shaft	19/3/06	Tunnel shafts	✓	Screw shaft	23/2/06	Propeller	23/2/06
Stern tube	19/1/06	Steam pipes tested	17/4/06	Engine and boiler seatings	10/4/06	Engines holding down bolts	17/19/4/06				
Completion of pumping arrangements	2/4/06	Boilers fixed	19/2/4/06	Engines tried under steam	26/4/06						
Main boiler safety valves adjusted	27/4/06	Thickness of adjusting washers	3/16								
Material of Crank shaft	Iron	Identification Mark on Do.	4519.08	Material of Thrust shaft	Iron	Identification Mark on Do.	4779.08				
Material of Tunnel shafts	✓	Identification Marks on Do.	✓	Material of Screw shafts	Iron	Identification Marks on Do.	4679.08				
Material of Steam Pipes	Copper, solid drawn	7W.9	Test pressure	360 lbs.							

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been built under special survey, the materials and workmanship are good and the case is eligible in my opinion for the notation +L.M.C. 4.06.*

The Committee have approved, in this instance, of one bilge pump and one feed pump being fitted. See Secretary's letter E dated 22nd March, 1906.

It is submitted that this vessel is eligible for THE RECORD +L.M.C. 4.06.

Rd. 17.5.06
Fms. 17.5.06

The amount of Entry Fee..	£ 1 : 00	When applied for,	7 th May 1906
Special	£ 11 : 80		
Donkey Boiler Fee	£ 12 : 80	When received,	17 th 7 th 1906
Travelling Expenses (if any)	13 : 16 : 0		9.7.06
	28 - 12 - 0		

Committee's Minute

FRI. 18 MAY 1906

Assigned

+ L.M.C. 4.06

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

