

REPORT ON MACHINERY.

No. 16635

THU. APR. 16. 1914

Survey held at Greenock Date, First Survey 3rd June, 1913 Last Survey 7th April, 1914
 on the Steam Steamer "Hermine" (Name of vessel) Greenock (Port of)
 Built at Greenock By whom built Canter & Co. Ltd. When made 1914
 By whom made John G. Kincaid & Co. Ltd. when made 1914

Is Electric Light fitted Yes
 Owners John G. Kincaid & Co. Ltd.
 Is Refrigerating Machinery fitted for cargo purposes Yes

Horse Power as per Section 28 520 No. of Cylinders Three No. of Cranks Three
 Description of Engines Triple Expansion Dia. of Screw shaft 14 1/2" Material of screw shaft Steel
 Length of Stroke 48" Revs. per minute 45 Is the after end of the liner made water tight Yes

Is the after end of the liner made water tight Yes
 If the liner is in more than one length are the joints burned Yes 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
 Length of stern bush 60 1/2"

Is the shaft lapped or protected between the liners Yes
 Dia. of Crank shaft journals 13 1/2" Dia. of Crank pin 14 1/2" Size of Crank webs 21 1/2" x 9" Dia. of thrust shaft under
 Dia. of screw 18 1/2" Pitch of Screw 1 1/2" No. of Blades 4 State whether moveable No Total surface 106 sq. ft.

Can one be overhauled while the other is at work Yes
 Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work Yes
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Sizes of Pumps 8" x 5" x 8" 9" x 13" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Holds, &c. Yes
 Engine Room Yes

Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"
 Are the sluices on Engine room bulkheads always accessible Yes
 Are the roses in Engine room always accessible Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes
 Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
 How are they protected Yes

What pipes are carried through the bunkers Yes
 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

Is it fitted with a watertight door Yes
 Manufacturers of Steel Stewart & Lloyd D. Colvill & Sons
 No. and Description of Boilers 3 Cylinders Single

Is Forced Draft fitted Yes No. and Description of Safety Valves to 1160"
 Total Heating Surface of Boilers 7719 sq. ft. Is Forced Draft fitted Yes No. and Description of Safety Valves to 1160"
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29/1/14 No. of Certificate 1160"

Can each boiler be worked separately Yes Area of fire grate in each boiler 59 sq. ft. Are they fitted with easing gear Yes
 Area of each valve 9.62 sq. ft. Pressure to which they are adjusted 182 lbs Size of manhole in shell 16" x 12"
 Mean dia. of boilers 15' 0" Length 12' 0" Material of shell plates Steel

Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap Double
 Thickness 1 1/2" Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9" Top of plates or width of butt straps 1 1/2"
 long. seams 2 1/2" Diameter of rivet holes in long. seams 1 1/2" Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"

Per centages of strength of longitudinal joint 91.7 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 32 1/2" x 28 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3 Deighton's Material Steel Outside diameter 4 1/4"
 Length of plain part 8 1/2" Thickness of plates 9" Description of longitudinal joint Weld No. of strengthening rings None

Working pressure of furnace by the rules 186 lbs Combustion chamber plates: Material Steel Thickness: Sides 5" Back 4" Top 5" Bottom 4"
 Pitch of stays to ditto: Sides 8" x 9" Back 9" x 8" Top 8" x 9" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs Material of stays Steel
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 44 sq. in. Working pressure by rules 180 lbs Material of stays Steel

Material Steel Thickness 1 1/2" Pitch of stays 2 1/2" x 20" How are stays secured By nuts Working pressure by rules 182 lbs Material of Front plates at bottom Steel
 Diameter at smallest part 3 3/4" Area supported by each stay 430 sq. in. Working pressure by rules 182 lbs Material of Front plates at bottom Steel
 Thickness 1 1/2" Material of Lower back plate Steel Thickness 3 1/2" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 186 lbs

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates Steel Thickness: Front 1 1/2" Back 1 1/2" Mean pitch of stays 8' 68"
 Pitch across wide water spaces 13" Working pressures by rules 184 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 1/2" x 1 1/2" Length as per rule 31.68" Distance apart 9" Can the superheater be shut off and the boiler worked
 Working pressure by rules 182 lbs Superheater or Steam chest; how connected to boiler None Diam. of rivet

separately Yes Diameter 1 1/2" Length 1 1/2" Thickness of shell plates 1 1/2" Material of flue plates Steel Thickness 1 1/2"
 Pitch of rivets 1 1/2" Working pressure of shell by rules 182 lbs Diameter of flue 1 1/2" How stayed By nuts
 If stiffened with rings Yes Distance between rings 1 1/2" Working pressure by rules 182 lbs End plates: Thickness 1 1/2" How stayed By nuts
 Working pressure of end plates 182 lbs Area of safety valves to superheater 182 lbs Are they fitted with easing gear Yes

2020-0206

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description When made Where fixed
 Made at By whom made No. of Certificate Fire grate area Description of Safety
 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 Rivets
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint 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 Radius of do. Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— Propeller and shaft, 2 main Bearing Bolts, 2 Gun Rod Bolt End Bolt, 2 Gun Rod Top End Bolt, 1 set Coupling Bolts, 1 set Feed & Bilge Pump valves, 1 set L & C Sprung for each Piston, 3 main Boiler Feed Check valves, 1 set Feed Check valve, 12 Joint Ring Bolts, 4 Boiler tubes, 12 Condenser tubes & 120 ferrules, 1 Escape valve Sprung of each size, 2 Safety valve Sprung, 1 Feed Pump discharge valve, 1 Bilge Pump discharge valve, 5 Bars that run & Bank from the valve, 50 Bolts & nuts ass't sizes, 5 Bars that run & Bank from the

The foregoing is a correct description,
 Jhu. G. Kincaid & Co. Ltd. Manufacturer.

Dates of Survey while building
 During progress of work in shops -- 1913 June 3-5 July 31 Aug 5-7 19-21 25 Oct 17 Nov 1-17 20-25 29 Dec 3-9 16-23 26-30 1914 Jan 7
 During erection on board vessel -- Feb 10-14 18-19 25 Mar 4-10 17-18 24-26 30 Apr 7
 Total No. of visits 41

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 25/2/14 Slides 19/2/14 Covers 25/2/14 Pistons 25/2/14 Rods 26/1/14
 Connecting rods 26/12/13 Crank shaft See Report Thrust shaft See Report Tunnel shafts See Report Screw shaft 17/3/14 Propeller 10/2/14
 Stern tube 18/2/14 Steam pipes tested Engine and boiler seatings Engines holding down bolts
 Completion of pumping arrangements Boilers fixed Engines tried under steam
 Main boiler safety valves adjusted Thickness of adjusting washers
 Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do.
 Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.
 Material of Steam Pipes Test pressure

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

The Engines and Boilers of this vessel were built under Special Survey and the materials and workmanship are good. After completion here, they were shipped to Trieste where they will be fitted on board. When this has been done to the satisfaction of the Society's Surveyors, the machinery tested under steam, the Spare Gear checked, and the requirements of the Rules in all other respects carried out, the vessel will in my opinion be eligible to have the record of **LMC** (with date of completion) marked on the Society's Register Book.

GREENOCK

Certificates (if required) to be sent to the Registrar

Sub 40. £ 30-13-6. £ 6-2-8
 In 40. £ 15-6-8. £ 3-1-4
 The amount of Entry Fee .. £ 2 : : :
 Special 36. .. £ 46 : : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 10/4/14
 When received, 29/5/14

Committee's Minute FRI. AUG 13 1915

Assigned Deferred for completion

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

FRI. 8-OCT. 1915

FRI. 11 FEB. 1916

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