

REPORT ON MACHINERY.

No. 41660

Received at London Office

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Date of writing Report 16.1.22 When handed in at Local Office 16.1.22 Port of Glasgow
No. in Survey held at Clydebank. Date, First Survey 24.3.1921 Last Survey 6.12.1921
Reg. Book. on the (Number of Visits 17)
Master Built at By whom built Furness S.B.C. (1919) When built
Engines made at Clydebank By whom made John Brown & Co. Ltd. 1920 when made 1921
Boilers made at By whom made when made
Registered Horse Power Owners Port belonging to
Shaft Horse Power at Full Power 5000 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

TURBINE ENGINES, &c.—Description of Engines Brown Curtis S.R. & Co. Ltd. No. of Turbines 2

Diameter of Rotor Shaft Journals, H.P. 7 1/2" L.P. 10 1/2" Diameter of Pinion Shaft H.P. & L.P. 9" with 3" hole
Diameter of Journals 9" with 3" hole Distance between Centres of Bearings 5' 1 1/4" Diameter of Pitch Circle 10' 0 1/2"
Diameter of Wheel Shaft 17" L.P. 25" Distance between Centres of Bearings 7' 1 1/4" Diameter of Pitch Circle of Wheel 144" 21"
Width of Face 50 Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted
No. of Screw Shafts Diameter of same as per rule as fitted Diameter of Propeller Pitch of Propeller
No. of Blades State whether Moveable Total Surface Diameter of Rotor Drum, H.P. L.P. Astern
Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 1270 Propeller 88

PARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION									
2ND									
3RD									
4TH									
5TH									
6TH									
7TH									
8TH									

No. and size of Feed pumps

No. and size of Bilge pumps

No. and size of Bilge suction in Engine Room

In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate
What pipes are carried through the bunkers How are they protected
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler
Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates 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
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell plates
Size of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
Length of plain part top crown Thickness of plates Description of longitudinal joint No. of strengthening rings bottom bottom
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Diameter at 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 wide 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 Steam dome: description of joint to shell % of strength of joint Diameter
Thickness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets
Working pressure of shell by rules Crown plates: Thickness How stayed

SUPERHEATER. Type ☒ Date of Approval of Plan ☒ Tested by Hydraulic Pressure to ☒
Date of Test. ☒ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ☒
Diameter of Safety Valve ☒ Pressure to which each is adjusted ☒ Is Easing Gear fitted. ☒

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

Being by John Brown & Co.,
26 bolts & nuts for H.P. & L.P. turbine casing, 20 bolts & studs with
nuts for H.P. & L.P. bearing & thrust covers, 2 each H.P. & L.P. bearing bushes, 1 set (9) H.P. & L.P.
gland carbon packing rings, 1 set (12) H.P. & L.P. gland springs, 1 set (2) H.P. & L.P. diaphragm
springs, 1 set H.P. & L.P. diaphragm brass serrated packing, Springs for H.P. & L.P. diaphragms
(48) 1/2 set; 1 set (2) main gear wheel bearing bushes. 1 set each, after central forward
bearing bushes for pinions, H.P. & L.P. turbine thrust liners (3 of each), 1 set (12) H.P. & L.P.
turbine thrust pads, 10 spanners.

The foregoing is a correct description, John Brown & Company, Limited.

Manufacturer.
Glydebank Secretary.

Dates of Survey while building { During progress of work in shops - - 1921 Mar 24 Apr 4 May 6 23 30 Jun 30 July 7 Aug 5 25 Sep 6 14 Nov 7 21 23 30 Dec 5 6.
During erection on board vessel - - -
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Casings 6/8/21 Rotors 6/12/21 Blading 5/12/21 Gearing 5/12/21

Rotor shaft 6/12/21 Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube 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 and tensile strength of Rotor shaft 5M. Steel 34.5 to 35 tons Identification Mark on Do. 256 254

Material and tensile strength of Pinion shaft Mucka Steel 40 to 45 tons Identification Mark on Do. 257 255

Material of Wheel shaft Steel Identification Mark on Do. 253 251

Material of Thrust shaft Steel Identification Mark on Do. 254 252

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Test pressure.

Is an installation fitted for burning oil fuel 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 a duplicate of a previous case? If so, state name of vessel SD 153/20

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been

built under special survey, the materials and workmanship

are of good description, it has been erected and tried in

the shop under steam. This machinery is in my opinion

eligible to have recognition of LME with date when satisfactorily

tested on land & tried under steam

to be sent to Middlesbrough.

The amount of Entry Fee ... £ 35 : 0 : 17.1.22

Special ... £ 35 : 0 : 17.1.22

Donkey Boiler Fee ... £ 10 : 3 : 19.22

Travelling Expenses (if any) £ 10 : 3 : 19.22

Committee's Minute GLASGOW 17 JAN 1922

Assigned Deferred