

REPORT ON MACHINERY.

No. 42291

Received at London Office **WED. NOV. 8 1922**

Date of writing Report *6.11.22* When handed in at Local Office *6.11.22* Port of *Glasgow*
 Date, First Survey *30 June 1921* Last Survey *Oct 25th 1922*
 (Number of Visits *15*)

Survey held at *Clydebank* on the *Clydebank*
 By whom built *James S. B. Ho (33)* When built *1912*
 By whom made *John Brown & Co (17320)* when made *1912*
 Registered Horse Power *1010 S.A.C.* Owners *S.A.C.* Port belonging to *S.A.C.*
 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

DESCRIPTION OF ENGINES *Brown Curtis S.R. General Turbine* No. of Turbines *3*
 Diameter of Rotor Shaft Journals, H.P. *7 1/2 to 14" L.P. 10" to 18"* Diameter of Pinion Shaft *H.P. 7 L.P. 9" with 3" hole*
 Diameter of Journals *9" with 3" hole* Distance between Centres of Bearings *H.P. 14.7 3' 1 1/2"* Diameter of Pitch Circle *10.012*
 Diameter of Wheel Shaft *17" to 25"* Distance between Centres of Bearings *7' 14"* Diameter of Pitch Circle of Wheel *144.21*
 Diameter of Face *50"* Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft *as per rule*
 Diameter of Screw Shafts Diameter of same *as per rule* Diameter of Propeller Pitch of Propeller
 State whether Moveable Total Surface Diameter of Rotor Drum, H.P. L.P. Astern
 Revs. per Minute at Full Power, Turbine *1270* Propeller *88*

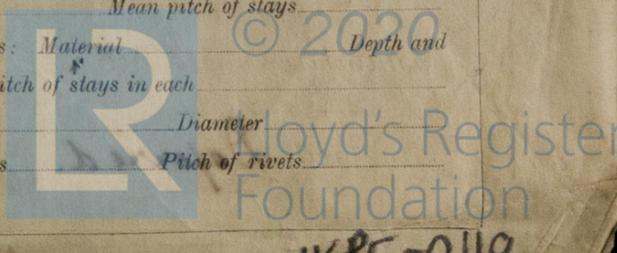
PARTICULARS OF BLADING.

EXPANSION	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.

and size of Feed pumps
 and size of Bilge pumps
 and size of Bilge suction in Engine Room
 In Holds, &c.

of Bilge Injections *sizes* Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size
 all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible
 all connections with the sea direct on the skin of the ship Are they Valves or Cocks
 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
 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
 all pipes are carried through the bunkers How are they protected
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
 the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel
 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
 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
 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
 7. 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 rivets Working pressure of shell by rules Size of manhole in shell
 plates plates plates plates
 No. and Description of Furnaces in each Boiler Material Outside diameter
 length of plain part Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom bottom 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:— Bolts and nuts for H.P. and L.P. turbine casing joints 26 off.

Bolts and studs with nuts for H.P. and L.P. bearings and thrust covers 20 off.

H.P. and L.P. bearing bushes Complete 2 off each (full set). H.P. and L.P. gland Carbon packing rings—
 9 off (half set). Springs for H.P. and L.P. glands 12 off (half set) H.P. Inter ahead + astern diaphragm
 springs 2 off (full set). H.P. Inter ahead + astern diaphragm brass serrated packing 1 off (full set).
 Springs for H.P. and L.P. diaphragms 48 off (half set). Main Gear wheel bearing bushes 2 off (full set).
 Aft Centre and fore and aft bearing bushes for Pinions 1 off each (half set). H.P. & L.P. Turbine thrust liners
 3 off each. H.P. and L.P. turbine thrust pads 12 off each (full set). 10 Spanners, 16 bolts for
 H.P. & L.P. flexible Couplings

The foregoing is a correct description.

John Brown & Company, Limited.

Manufacturers.

J. Henderson
 Clydebank Secretary.

Dates of Survey while building { During progress of work in shops - - - 1921 Jun 30 July 7 Aug 19 Sep 14 Nov 21 1922 Jan 27 Feb 28 21 22 May 10 Sep 13 Oct 24 25
 { During erection on board vessel - - -
 Total No. of visits 13

Is the approved plan of main boiler forwarded herewith _____

Is the approved plan of donkey boiler forwarded herewith _____

Dates of Examination of principal parts—Casings 10/5/22 Rotors 25/10/22 Blading 25/10/22 Gearing 25/10/22

Rotor shaft 25/10/22 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 fired _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material and tensile strength of Rotor shaft S.M. Steel 34 to 38 tons Identification Mark on Do. 354 355-
23/10/22
25/10/22

Material and tensile strength of Pinion shaft Nickel steel 40 to 45 tons Identification Mark on Do. 1873 1872
23/10/22
25/10/22

Material of Wheel shaft Steel Identification Mark on Do. 254
23/10/22
25/10/22 Material of Thrust shaft _____ Identification Mark on Do. _____

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 *yes* If so, state name of vessel *no job* *SO 153, 20, 20, 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. The parts have been tried under steam in the shop with satisfactory results and will be in my opinion eligible to have notification of T.M.C. with date when satisfactorily fitted on board the vessel & tried under steam. This machinery has now been forwarded to Messrs Richardson Westgarth & Co to be fitted on board the vessel*

	When applied for,	When received,
The amount of Entry Fee ... £	7 11 1922	
Special ... £ 35 : 0		
Donkey Boiler Fee ... £		
Travelling Expenses (if any) £	1 7 2 1922	

A. M. Keane
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 7 - NOV 1922** **FRI. AUG. 31 1923**

Assigned *Deferred*

HL 6-11-22

Certificate (if required) to be sent to... (The Surveyors are requested not to write on or below the space for Committee's Minute.)



F.P. above 150°F.