

REPORT ON STEAM TURBINE MACHINERY. No. 48922

Received at London Office 27 FEB 1929

Date of writing Report 22-2-1929 When handed in at Local Office 25-2-1929 Port of Glasgow

No. in Survey held at Palmuir Date, First Survey 25-10-28 Last Survey 20 Feb 1929

Reg. Book. on the S.S. "Summa" (Number of Visits 20)

Built at Govans By whom built A. Stephen & Sons Ltd Yard No. 522 Tons Gross 1929

Engines made at " By whom made " Engine No. 522 When made 1929

Boilers made at " By whom made " Boiler No. " When made 1929

Shaft Horse Power at Full Power 800 Owners Port belonging to

Nom. Horse Power as per Rule 133 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which Vessel is intended Indian

STEAM TURBINE ENGINES, &c.—Description of Engines Bauer Nach Installation B.W.3

No. of Turbines Ahead 1 Direct coupled, single reduction geared to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 1

direct coupled to Alternating Current Generator phase periods per second Direct Current Generator rated Kilowatts Volts at revolutions per minute;

for supplying power for driving Propelling Motors, Type rated Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE BLADING.	H.P.			I.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.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION							90 m/m	930 m/m	1			
2ND							107 "	964 "	1			
3RD							125 "	1000 "	1			
4TH							142 "	1030 "	1			
5TH		nil			nil		160 "	1070 "	1		nil	
6TH							180 "	1110 "	1			
7TH							200 "	1150 "	1			
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine H.P. 800 also 1070 - Gls letter 2/10/28 I.P. 3400 L.P. 3400

Rotor Shaft diameter at journals H.P. 236 m/m I.P. 236 m/m L.P. 236 m/m Pitch Circle Diameter 1st pinion 8.7839" 2nd pinion 12.2837" 1st reduction wheel 50.7737" main wheel 92.2705"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 245 m/m 2nd pinion 485 m/m 1st reduction wheel 310 m/m main wheel 560 m/m

Flexible Pinion Shafts, diameter at bearings 1st nil 2nd nil Pinion Shafts, diameter at bearings External 1st 180 m/m 2nd 280 m/m Internal 1st 180 m/m 2nd 280 m/m

Wheel Shafts, diameter at bearings 1st 250 m/m 2nd 500 m/m (-400 hole) Generator Shaft, diameter at bearings 51.1467" Propelling Motor Shaft, diameter at bearings 92.7678"

Intermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars 360 m/m Tube Shaft, diameter as per rule

Screw Shaft, diameter as per rule Is the tube screw shaft fitted with a continuous liner Bronze Liners, thickness in way of bushes as per rule

Thickness between bushes as fitted Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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 Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft

Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface squares feet

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or I.P. Turbine exhaust direct to the Condenser

No. of Turbines fitted with astern wheels Feed Pumps No. and size How driven

Pumps connected to the Main Bilge Line No. and size How driven Lubricating Oil Pumps, including Spare Pump, No. and size

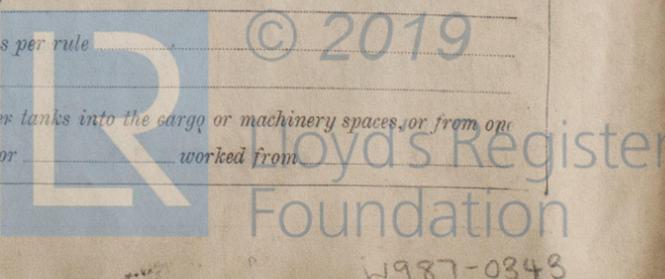
Ballast Pumps, No. and size Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main, Bilge, Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room

In Holds, &c. Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks



BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers

Is Forced Draft fitted No. and Description of Boilers Working Pressure

Is a Report on Main Boilers now forwarded?

Is { a Donkey } Boiler fitted? If so, is a report now forwarded?
 { an Auxiliary }

Plans. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)

Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements

Spare Gear. State the articles supplied:— 1 set bushes for bearings for main wheels, pinions, and coupling, pads for thrust block, spare blades for turbine, etc.

FOR WILLIAM BEARDMORE & CO., LIMITED.

Robert Love

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1928 Oct 25 Nov 1 5 13 20 27 29 Dec 5 10 13 17 26 28 (1929) Jan 7 15 30 Feb 5 12 18 20
 { During erection on board vessel --- }
 Total No. of visits 20

Dates of Examination of principal parts—Casings 1-11-28 di Rotors 5-11-28 di Blading 15-1-29. di Gearing 5-11-28 di

Wheel shaft 13-11-28 di Thrust shaft 26-12-28 di Intermediate shafts Tube shaft Screw shaft

Propeller Stern tube Engine and boiler seatings Engine holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Rotor shaft, Material and tensile strength S. 32-36 Identification Mark 2675

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength W. S. 43-54 Identification Mark 2675

1st Reduction Wheel Shaft, Material and tensile strength W. S. 43-54 Identification Mark 2675

Wheel shaft, Material S Identification Mark 2675 Thrust shaft, Material S Identification Mark 2675

Intermediate shafts, Material Identification Marks Tube shaft, Material Identification Marks

Screw shaft, Material Identification Marks Steam Pipes, Material Test pressure

Date of test 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 the Rules for carrying and burning oil fuel been complied with.

Is this machinery a duplicate of a previous case. *no* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. This L. P. turbine, and H. R. gearing, and hydraulic coupling has been built under special survey in accordance with the approved plans, and the Society's Rules, and requirements the materials and workmanship are good.

The installation has been dispatched to A. Stephen & Sons L^{td}, Govan, to be fitted on board.

The amount of Entry Fee ... £

Special ... £ 13-6-0 26 FEB 1929

Donkey Boiler Fee ... £

Travelling Expenses (if any) ... £

Jas Cairns
 Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 7 JUN 1929

Committee's Minute GLASGOW 26 FEB 1929

Assigned *Deferred.*



© 2019

Lloyd's Register Foundation

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

Rpt. 5a.
 Date of writing
 No. in Reg. Book.
 Master
 Engines ma
 Boilers ma
 Nominal H
 MULTY
 Manufactur
 Total Heat
 No. and D
 Tested by
 Area of Fi
 Area of ea
 In case of
 Smallest di
 Smallest di
 Largest int
 Thickness
 long. seams
 Percentage
 Percentage
 Thickness
 Material
 Length of
 Dimensions
 End plates
 How are s
 Tube plate
 Mean pitch
 Girders to
 at centre
 in each
 Tensile str
 Pitch of st
 Working p
 Thickness
 Pitch of st
 Working L
 Diameter
 Working p
 Diameter