

REPORT ON STEAM TURBINE MACHINERY. No. 95792

Received at London Office

Date of writing Report

19

When handed in at Local Office

31/12/37 Port of NEWCASTLE-ON-TYNE

No. in Survey held at

Newcastle on Tyne

Date, First Survey

13/5/37

Last Survey

29/12/1937

Reg. Book.

on the S/S "BASSANO"

(Number of Visits 85)

Tons Gross 4843
Net 2687

Built at Newcastle on Tyne

By whom built Swan, Hunter & Wigham

Yard No. 1560

When built 1937-12

Engines made at do

By whom made ditto

Richardson & Co

Engine No. 1560

When made 1937

Boilers made at do

By whom made ditto

L.P. TURB.

Boiler No. 1560

When made 1937

Shaft Horse Power at Full Power

1525

Owners Ellerman Wilson Line

Port belonging to HULL.

Nom. Horse Power as per Rule

779.86

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines

Recip Eng combined with Exh. Steam Turbine, DR Geared and hydraulic coupling.

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

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.

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								67 ^M / _M	934 ^M / _M	1.			
2ND "								88.	976.	1.			
3RD "								109.	1018.	1.			
4TH "								130.	1060.	1.			
5TH "								151.	1102.	1.			
6TH "								181.	1162.	1.			
7TH "								210.	1220.	1.			
8TH "													
9TH "													
10TH "													
11TH "													
12TH "													

Shaft Horse Power at each turbine H.P. I.P. L.P. 1525. Revolutions per minute, at full power, of Turbine Shaft H.P. I.P. L.P. 3234

Rotor Shaft diameter at journals H.P. I.P. L.P. 170 mm. Pitch Circle Diameter 1st pinion 260.667 mm. 2nd pinion 463.484 mm. 1st reduction wheel 1808.376 mm. main wheel 2330.4779 mm. Face 1st reduction wheel 290 mm. main wheel 610 mm.

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 295 mm. 2nd pinion 505 mm. 1st reduction wheel 415 mm. main wheel 590 mm.

Flexible Pinion Shafts, diameter at bearings 1st 170 mm. 2nd 420 mm. 3rd 355 mm. Generator Shaft, diameter at bearings 1st 1738 mm. 2nd 2230 mm. Propelling Motor Shaft, diameter at bearings 1st 1738 mm. 2nd 2230 mm.

Wheel Shafts, diameter at bearings 1st 300 mm. 2nd 550 mm. diameter at wheel shroud, 1st 1738 mm. 2nd 2230 mm.

Intermediate Shafts, diameter as per rule 14.37" as fitted 14.34" Thrust Shaft, diameter at collars as per rule as fitted

QUILL SHAFT as per rule 14.07" as fitted 385 mm. (15.15") Screw Shaft, diameter as per rule as fitted

Is the tube shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per rule as fitted Thickness between bushes as per rule 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 insulating 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 If so, state type Length of Bearing in Stern Bush next to and supporting propeller

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

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

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, 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 Pump 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

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges 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 pass through the bunkers How are they protected

What pipes pass through the deep tanks Have they been tested as per rule

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

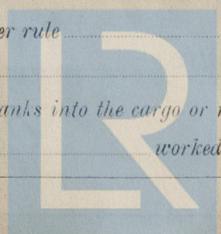
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door

Is it fitted with a watertight door

Is it fitted with a watertight door

Is it fitted with a watertight door

Is it fitted with a watertight door



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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?
Is the donkey boiler intended to be used for domestic purposes only
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.

Has the spare gear required by the Rules been supplied
State the principal additional spare gear supplied
1. Spare bearing of each size fitted.
1 set of thrust pads for each thrust bearing.
1 spring & 1 set of washers for emergency governor, etc

FOR SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

G. J. Mearns
DIRECTOR Manufacturer.

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops -- }
{ During erection on board vessel --- }
Total No. of visits See Rpt 4.
Dates of Examination of principal parts—Casings 15/10/37 Rotors 11/10/37 Blading 1/11/37 Gearing 1/11/37
Wheel shaft 1/11/37 Quill inter shaft 1/11/37 Intermediate shafts ✓ Tube shaft ✓ Screw shaft ✓
Propeller ✓ Stern tube ✓ See Report 4 on Recip. Engines.
Engine and boiler seatings ✓ Engine holding down bolts ✓
Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam 21/12/37
Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓
Rotor shaft, Material and tensile strength S.M. Steel 37.8 tons Identification Mark 7276 HAI.
1st Redn. Flexible Pinion Shaft, Material and tensile strength Nickel Steel 42.5 tons Identification Mark 7013 DB
2nd Redn. Pinion shaft, Material and tensile strength Nickel Steel 49.8 tons Identification Mark 7275 HAI.
(Hydr Coupling) 1st Reduction Wheel Shaft, Material and tensile strength S.M. Steel 29.8 tons Identification Mark 7434 A. HAI.
Wheel shaft, Material S.M. Steel Identification Mark 7276 HAI. Thrust shaft, Material ✓ Identification Mark ✓
Quill Intermediate shaft, Material S.M. Steel Identification Marks 7276 HAI. Tube shaft, Material ✓ Identification Marks ✓
aback Crank shaft. Identification Marks ✓ Steam Pipes, Material ✓ Test pressure ✓
Screw shaft, Material ✓
Date of test ✓ See Report 4 on Recip. Engine. 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 the use of oil as fuel been complied with ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. ✓ If so, have the requirements of the Rules been complied with ✓
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with Yes. ✓
Is this machinery a duplicate of a previous case Yes If so, state name of vessel S/S CONSUELO.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Machinery has been built under special survey in accordance with the Rules & approved plans, and the materials and workmanship are good.
It has been satisfactorily installed on board with the Recip. Engine (Rpt 4) and tried under full working conditions.
Please also See Report 4 on Recip Engines herewith.

The amount of Entry Fee	£	See Rpt 4.	When applied for,
Special	£	:	19
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any)	£	:	19

A. Watt.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

14 JAN 1938

Assigned

See Nav. J.E. 95792