

REPORT ON STEAM TURBINE MACHINERY. No. 95945

Received at London Office FEB 17 1938

Date of writing Report 19 When handed in at Local Office 16 FEB 1938 Port of NEWCASTLE-ON-TYNE
No. in Survey held at Newcastle on Tyne Date, First Survey 10/19/37 Last Survey 9/2/1938
Reg. Book. on the S/S "TASSO" (Number of Visits 1586)
Built at Newcastle By whom built Swan Hunter & W. Richardson & Co. Yard No. 1580 When built 1938-2
Engines made at do By whom made do Engine No. 1580 When made 1938
Shaft Horse Power at Full Power 726 Owners Ellerman's Wilson Line Port belonging to HULL.
Nom. Horse Power as per Rule See Rpt 4 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which Vessel is intended Ocean going

STEAM TURBINE ENGINES, &c.—Description of Engines L.P. Turbine (Bauerbach) with D.R. gearing & hydraulic coupling.
No. of Turbines Ahead one Dissect coupled, single reduction geared to one propelling shaft No. of primary pinions to each set of reduction gearing one
Astern none double reduction geared
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							54.4"	658.4"	one			
2ND							70. "	690. "	"			
3RD							87. "	724. "	"			
4TH							106. "	762. "	"			
5TH							128. "	806. "	"			
6TH							150. "	850. "	"			
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at the turbine H.P. 726 I.P. 726 L.P. 4720
Revolutions per minute, at full power, of the Turbine Shaft 1st reduction wheel 732. I.P. 115. L.P. 115.
Rotor Shaft diameter at journals H.P. 125 I.P. 125 L.P. 125
Pitch Circle Diameter 1st pinion 206.3614 1st reduction wheel 1330.4877 2nd pinion 309.541 main wheel 1911.5518
Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 227.5 2nd pinion 390.5 main wheel 480.5
Flexible Pinion Shafts, diameter 1st 100 2nd 100
Pinion Shafts, diameter at bearings 1st 220 2nd 190
Wheel Shafts, diameter at bearings 1st 1260 2nd 1820
Generator Shaft, diameter at bearings 1st 191.7246 2nd 294.9042
Intermediate Shafts, diameter as per rule as fitted
Thrust Shaft, diameter at collars as per rule as fitted
Tube Shaft, diameter as per rule as fitted
Screw Shaft, diameter as per rule as fitted
Bronze Liners, thickness in way of bushes as per rule as fitted
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 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
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 worked from

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} _{an Auxiliary} 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
(If not state date of approval)

Main Boilers

Auxiliary Boilers

Donkey Boilers

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

See Report on Recip Machinery.
2 Studs + nuts for L.P. Rotor bearings, 1st & 2nd redn pinion bearings & main wheel bearings; 5 1/2 of total no. of bolts + nuts for Gear Case joint and also turbine casing joint; 1 set of bushes for all bearings; pads for one face of main mitchell thrust bearing. one set of pads & liners for Turbine thrust bearing.

FOR

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

The foregoing is a correct description,

G. J. Dwyer

Manufacturer.

DIRECTOR.

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 23/11/37 Rotors 18/11/37 Blading 2/12/37 Gearing 2/12/37

Wheel shaft 2/12/37 Thrust shaft *See Report on Recip Machinery.* Intermediate shafts Tube shaft Screw shaft

Propeller Stern tube Engine and boiler seatings Engine holding down bolts

Completion of fitting sea connections 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.M. forged Steel / 39.1 tons/A*

Identification Mark 12526 J.L.

Flexible Pinion Shaft, Material and tensile strength *S.M.F.S. / 30.9 "*

Identification Mark 12411 J.L.

1st Redn Pinion shaft " " *S.M.F.S. / 43.9 "*

Identification Mark 12501 J.L.

Pinion shaft, Material and tensile strength *S.M.F.S. / 42.3 "*

Identification Mark 12512 J.L.

1st Reduction Wheel Shaft, Material and tensile strength *S.M.F.S. / 29.3 "*

Identification Mark 12412 J.L.

Wheel shaft, Material *S.M.F.S.* Identification Mark 12413 J.L. Thrust shaft, Material Identification Mark

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 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

Is this machinery a duplicate of a previous case *Yes* If so, state name of vessel *75 LECH.*

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

This machinery has been constructed under special survey in accordance with the Rule & approved plans, and the materials & workmanship are good. The machinery has been satisfactorily installed on board the vessel, examined under working conditions & found satisfactory.

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

A. Watt.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 22 FEB 1938

Assigned

See other F. E. report



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