

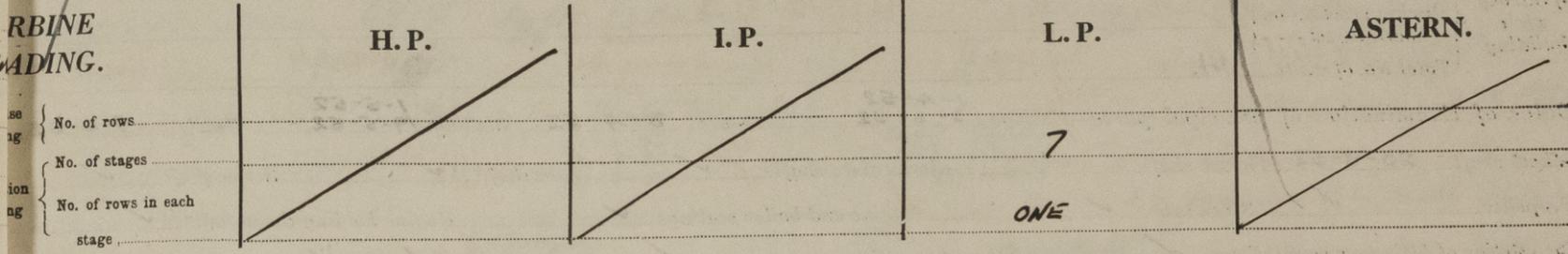
Report on Steam Turbine Machinery. No. 109482

Received at London Office 26 MAY 1953

When handed in at Local Office 19th Sept 1952 Port of Newcastle upon Tyne
 Survey held at Walker-on-Tyne Date, First Survey 3rd March Last Survey 28th August 1952
 (Number of Visits 14)
 on the B.W. 188. — ss 'RUSHWOOD' Tons (Gross 6208 Net 3344)
 at South Shields By whom built J. Readhead & Sons Ltd Yard No. 574 When built 1952
 made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 574 When made 1952
 made at Walker-on-Tyne By whom made J. Readhead & Sons Ltd Boiler No. 188 When made 1952
 Horse Power at Full Power 773 Owners WM. FRANCE, PENNICK & CO. LTD. Port belonging to LONDON
 Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 for which Vessel is intended OCEAN GOING

STEAM TURBINE ENGINES, &c.—Description of Engines Bauer-Wach I.P. Turbine with D.R. Gearing & Hydraulic Coupling

of Turbines Ahead ONE Direct coupled, single reduction geared to ONE propelling shafts. No. of primary pinions to each set of reduction gearing ONE
 coupled to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;
 supplying power for driving Propelling Motors, Type Direct Current Generator
 d. Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.



Horse Power at each turbine { H.P. - I.P. - L.P. 773 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. - I.P. - L.P. 3472 }
 Shaft diameter at journals { H.P. - I.P. - L.P. 125 7/8 } Pitch Circle Diameter { 1st pinion 217.2225 7/8 1st reduction wheel 1515.1269 7/8 2nd pinion 342.1254 7/8 main wheel 1998.4469 7/8 }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 217.2225 7/8 1st reduction wheel 1515.1269 7/8 2nd pinion 342.1254 7/8 main wheel 1998.4469 7/8 }

Pinion Shafts, diameter at bearings { 1st 115 7/8 2nd - } External/Internal diameters at bottom of pinion teeth { 1st 175 7/8 2nd 320 7/8 }

Wheel Shafts, diameter at bearings { 1st 250 7/8 AFT. 2nd 500 7/8 EXT. 400 7/8 INT. } Generator Shaft, diameter at bearings { 1st 1445 7/8 main 1908 7/8 } Propelling Motor Shaft, diameter at bearings { 1st 13.64 2nd 13.98 }

Intermediate Shafts, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the tube/screw shaft fitted with a continuous liner

Propeller 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

Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine No Can the H.P. or I.P. Turbines 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 2-9'x8'x18" Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary In Pump Room

Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

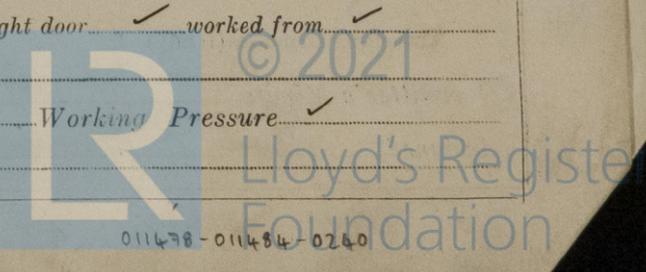
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

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 level

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 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 Shaft Tunnel watertight Is it fitted with a watertight door worked from

Boilers, &c.—(Letter for record) Total Heating Surface of Boilers Working Pressure No. and Description of Boilers 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. ^{RETAINED} 17-4-51 Main Boilers Auxiliary Boilers Donkey Boilers

(If not, state date of approval)

Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements

Geared turbines Have torsional vibration characteristics of system been approved? Date of approval

SPARE GEAR.

Has the spare gear required by the Rules been supplied? Yes

State the principal additional spare gear supplied. *One bearing of each size fitted. One set of thrust pads for each thrust bearing. One spring and one set of washers for emergency governor.*

The foregoing is a correct description,

For SWAN HUNTER & WRIGHT ENGINEERS LTD.

DIRECTOR Manufa

Dates of Survey while building

During progress of work in shops - (1952) MAR 3, 25, 28, APR 1, 8, 22, MAY 1, 19, JUNE 9, AUG 12, 15, 20, 24, 28

During erection on board vessel - - -

Total No. of visits 14.

Dates of Examination of principal parts - Casings 1-4-52, 3-3-52 Rotors 8-4-52 Blading 1-5-52, 19-5-52 Gearing 9-6-52

Wheel shaft 20-8-52 Thrust shaft 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 28-8

Main boiler safety valves adjusted Thickness of adjusting washers

Rotor shaft, Material and tensile strength O.H. Ingot Steel 36 TONS Identification Mark 22227. H.A.I. 40

1st RED. Pinion Shaft, Material and tensile strength Nickel Steel 47.5 TONS Identification Mark

2nd RED. Pinion shaft, Material and tensile strength Nickel Steel 13-44.5 TONS Identification Mark 22227. H.A.I. 49

; Chemical analysis As per Rule Requirements

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment As per Rule Requirements

1st Reduction Wheel Shaft, Material and tensile strength O.H. Ingot Steel 30-31 TONS Identification Mark 22227. H.A.I. 408

Wheel shaft, Material O.H. Ingot Steel Identification Mark 2227. H.A.I. 409 Thrust shaft, Material O.H. Ingot Steel Identification Mark 2227. H.A.I.

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 No If so, state name of vessel

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

Conn coupling O.H. Steel 35 Tons/0". 22227. H.A.I. 411.

1st red. gear wheel rims O.H. Steel 32 TONS 22227. H.A.I. 406.

2nd " " " " 31 TONS 22227. H.A.I. 407.

This machinery has been constructed under Special Survey in accordance with the Secretary's Letters, Approved Plans and Rule Requirements.

The material and workmanship is good.

On completion the turbine was tested under steam with speeds up to 4350 RPM. The governor was adjusted to operate at 4200 RPM (Normal 4350 RPM).

The machinery has been despatched to South Shields for installation in Redheads Engine

SURVEY OF MACHINERY. NEWCASTLE-ON-TYNE.

This turbine has been satisfactorily installed aboard the S.S. KUSHWOOD.

The amount of Entry Fee	£ 24 : 0	When applied for	22 SEP 1952
Special	£ :	When received	19
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		19

John Walker
SURVEYOR TO LLOYD'S REGISTER OF SHIPPING
NEWCASTLE-ON-TYNE

John T. Findlay & P. Antygin
Engineers Surveyors to Lloyd's Register of Shipping.

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

Committee's Minute **FRI. 19 JUN 1953**

Assigned *See F.E. Welch, rpt.*

