

REPORT ON STEAM TURBINE MACHINERY.

No. 98639

Received at London Office JUL 13 1940

Writing Report

When handed in at Local Office

10/7/40 Port of

NEWCASTLE-ON-TYNE

Survey held at

Newcastle on Tyne

Date, First Survey

14 Dec/1939

Last Survey

25/6/

1940

Book.

on the

S.S. "Ismaïla"

(Number of Visits 19.)

Gross

Tons

Net

at W. Hartlepool

By whom built

Wm Gray & Co

Yard No. 1105

When built

es made at

By whom made

Central Marine Eng. Works

Engine No. 1105

When made

s made at Newcastle on Tyne

By whom made

Swan, Hunter & Wigham Richardson & Co.

L.P. TURBINE

No. 1642

When made 1940-6

Horse Power at Full Power 1165

Owners

Port belonging to

Horse Power as per Rule 194

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

for which Vessel is intended

Ocean going

M TURBINE ENGINES, &c.—Description of Engines

L.P. Exh. Stm Turbine with D/P Gearing & Hydr. Coupling

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

Aster Atern double reduction geared

Applied to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;

Driving power for driving Propelling Motors, Type

Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

	H.P.			I.P.			L.P.			ASTERN.		
LINE	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.
EXPANSION							61 MM	822 MM	One			
"							79	858	One			
"							97	894	One			
"							115	930	One			
"							137	974	One			
"							160	1020	One			
"							185	1070	One			

Horse Power at turbine Exh. Stm. H.P. 1165 L.P. 3677

Revolutions per minute, at full power, of Turbine Shaft 1st reduction wheel 466. main shaft 81.

Shaft diameter at journals Pitch Circle Diameter 1st pinion 206.3614 MM 1st reduction wheel 1629.1687 MM 2nd pinion 378.6211 MM main wheel 2115.0556 MM Face 255.4 MM 295.1st reduction wheel 280 MM main wheel 580 MM 370 MM 500 MM

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 115. 2nd pinion 150 MM 350 MM 285 MM

Pinion Shafts, diameter at bearings External 1st 1550 MM Generator Shaft, diameter at bearings 2015 MM

Shafts, diameter at bearings main 500 MM diameter at wheel shroud, 2015 MM Propelling Motor Shaft, diameter at bearings 13.65"

Intermediate Shafts, diameter as per rule 13.59 13" with Recp. 2nd line Thrust Shaft, diameter at collars as per rule 365 MM = 14.37"

Shaft, diameter as fitted Screw Shaft, diameter as fitted Is the tube screw shaft fitted with a continuous liner

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

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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 so, state type Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller

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

Can the H.P. or L.P. Turbine exhaust direct to the

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

connected to the Main Bilge Line No. and size How driven

Lubricating Oil Pumps, including Spare Pump, No. and size Two 9 x 8 x 18 stroke

Independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Engine and Boiler Room In Pump Room

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

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

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

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

fired 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

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

How are they protected Have they been tested as per rule

Pipes pass through the bunkers

Pipes pass through the deep tanks

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

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

ment to another Is the Shaft Tunnel watertight 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? { an Auxiliary }

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 (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 Bearing of each size fitted
1 set of Thrust Pads for each Thrust Bearing
1 Spring & 1 set washers for Emergency Governor
etc.

The foregoing is a correct description,

G. J. Dwyer

Dates of Survey while building

During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits 19.

Dates of Examination of principal parts—Casings 7/5/40 Rotors 5/3/40 Blading 26/6/40 Gearing 6/5/40

Wheel shaft 6/5/40 Thrust shaft 6/5/40 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 L.P. Turbine Engine tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Rotor shaft, Material and tensile strength O.H.F. Steel 36.2 tons Identification Mark 8790 HAI.

Flexible Pinion Shaft, Material and tensile strength 7th Red. 44 tons (Y.P. 31 tons) Identification Mark 8790 HAI.

Pinion shaft, Material and tensile strength 2nd Red. do. 43.66 tons (Y.P. 30.17 tons) Identification Mark 25/40 4B.

1st Reduction Wheel Shaft, Material and tensile strength O.H.F.S. 29 tons Identification Mark 8790 HAI.

Wheel shaft, Material O.H.F.S. Identification Mark 8790 HAI. Thrust shaft, Material O.H.F.S. Identification Mark 8790 HAI.

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 Wm Gray's Yard No. 1102. = 5/5 1103 = 5/5

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

This Exh. Steam Turbine & D/K Gearing

has been constructed under special survey in accordance with

Society's Rules & approved plan, and the materials & workmanship are

The Turbine was satisfactorily tested under steam (no load) in the work

The machinery has been sent to W. Hartlepool for installation

This exhaust turbine installation has now been satisfactorily

fitted on board and tried under working conditions with

satisfactory results. Arthur W. Oxford.

West Hartlepool.

7/12/40.

A. Watt

Engine Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £

Special ... £ 19-8/-

Donkey Boiler Fee ... £

Travelling Expenses (if any) ... £

Committee's Minute

Assigned

See Apl. J.E. 18096

FRI. 20 DEC 1940

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