No. 4863

REPORT ON STEAM TURBINE MACHINERY.

Received at London Office THU. DEC. 21 1922

Writing Report 20 dec 1922 When handed in at Local Office 19 Port of Havre

Survey held Caen. Date, First Survey 20 april Last Survey 12 december 1922 (Number of Visits 8)

Book. on the Oil tank. St Boniface Tons { Gross / Net

at Caen By whom built Chantiers Navals Français Yard No. 21 When built

s made at St Nazaire By whom made Chantiers de la Loire Engine No. When made 1922

s made at St Nazaire By whom made Chantiers de Penhouet Boiler No. When made 1922

Horse Power at Full Power NHP 582 Owners Ste Navale de l'Ouest Port belonging to Havre

Horse Power as per Rule 2750 Is Refrigerating Machinery fitted for cargo purposes ∠ Is Electric Light fitted yes.

M TURBINE ENGINES, &c.—Description of Engines turbine No. of Turbines Ahead 3 Astern 2

upled, single or double reduction geared to double propelling shafts. No. of primary pinions to each set of reduction gearing 1, direct coupled to phase periods per second, Alternating Current Generator rated Kilowatts Volts at revolutions per minute; for supplying power for driving Propelling Motors. Propelling Motors, Type

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

CULARS OF 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.
ION												

se Power at each turbine 2750 Revolutions per minute, at full power, of each Turbine Shaft HP, MP. 3197.10 LP. 2293.57 1st reduction wheel 330,88

75 Pitch Circle Diameter, 1st pinion HP. MP 180.84 LP 252,09 2nd pinion 471.21 1st reduction wheel 1.518 main wheel 2.393

Face, 1st reduction wheel 496 main wheel 430 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings,

378 2nd pinion 440 1st reduction wheel 987 main wheel 450 Flexible Pinion Shafts, diameter 1st ∠ 2nd ∠

afts, diameter at bearings External / Internal 1st 108 / 2nd 300 diameter at bottom of teeth of pinion 1st HP 166.6 LP- 237 2nd 457

afts, diameter at bearings, 1st 500 main 500 diameter at wheel shroud, 1st ∠ main ∠

Shafts, diameter at bearings ∠ Propelling Motor Shafts, diameter at bearings ∠

fting, diameter of Tunnel Shafting as per rule 338 m/m as fitted none diameter of Thrust Shafting as per rule 355 m/m as fitted 500 Michell system

Screw Shaft as per rule 406 m/m ✓ as fitted 500 ✓ Is the screw shaft fitted with a continuous liner the whole length of the stern tube without Is the after end of the liner

ight in the propeller boss ∠ If the liner is in more than one length are the joints burned ∠ If the liner does not fit tightly at the 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 or protected between the liners ∠ Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently

yes Vickers system ✓ Length of Stern Bush 2478 ✓ Diameter of Propeller 5.800

peller 4,900 No. of Blades 4 State whether Moveable yes Total Surface 10 m2 ~ square feet. If Single Screw, are

s made so that steam can be led direct to the L.P. Turbine, and either the H.P. or I.P. Turbine can exhaust direct to the Condenser yes. ✓

ines fitted with astern wheels 2 Total number of power driven Main and Auxiliary Pumps 8

of Feed Pumps 3 90 m/m How driven separate No. and size of Pumps connected to the Main Bilge Line 2 main engine 90 m/m 1 separate 90 m/m

2 main engine 1 separate No. and size of Ballast Pumps 1 of 180 tons 90 m/m — 1 of 40 tons 90 m/m No. and size of Lubricating Oil Pumps, including

2 50 m/m Are two independent means arranged for circulating water through the Oil Cooler 2 circul. pump service pump. No. and size of suctions

both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 6 — 90 m/m ✓ and in Holds, &c. Fore Hold 90 m/m pump in the fore compartment pumps

of Main Water Circulating Pump Bilge Suctions 1 — 240 m/m No. and size of Donkey Pump Direct Suctions

e Room Bilges 2 — 90 m/m ✓ Are all the bilge suction pipes in holds ~~and tunnel~~ well fitted with strum-boxes yes. ✓

e 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 yes. ✓

ections with the sea direct on the skin of the ship yes ✓ Are they Valves or Cocks cock (Valve for pump service)

d sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above

h fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes.

re carried through the bunkers none How are they protected ∠

s, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes. ✓

gement 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 to another yes ✓ Is the Screw Shaft Tunnel watertight none tunnel Is it fitted with a watertight door ∠ worked from ∠

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

d Draft fitted No. and Description of Boilers Working Pressure

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Is a Report on Main Boilers now forwarded? yes.

Is a Donkey Boiler fitted? yes. *If so, is a report now forwarded?* yes.

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

Spare Gear. *State the articles supplied:—*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building — *During progress of work in shops* / *During erection on board vessel* / *Total No. of visits*: 20 april – 6 june – 13 june – 26 july – 8 august – 25 sept – 19 oct – 12 dec.

Dates of Examination of principal parts—Casings ... *Rotors* ... *Blading* ... *Gearing*

Wheel shaft ... *Thrust shaft* ... *Tunnel shafts* ... *Screw shaft* ... *Propeller*

Stern tube ... *Engine and boiler seatings* 13 june ... *Engines holding down bolts* 25 july

Completion of pumping arrangements 17 sept. ... *Boilers fixed* 26 july ... *Engines tried under steam* 12 dec

Main boiler safety valves adjusted 16 sept ... *Thickness of adjusting washers* Aft Boiler stark. {st-9.7 / P-9.8} | aft boiler port {st-9.4 / P-8.5} | fore boiler {st-8.8 / P-9.6}

Material and tensile strength of Rotor shaft ... *Identification Mark on Do.*

Material and tensile strength of Flexible Pinion Shaft ... *Identification Mark on Do.*

Material and tensile strength of Pinion shaft ... *Identification Mark on Do.*

Material and tensile strength of 1st Reduction Wheel Shaft ... *Identification Mark on Do.*

Material of Wheel shaft ... *Identification Mark on Do.* ... *Material of Thrust shaft* ... *Identification Mark on Do.*

Material of Tunnel shafts ... *Identification Marks on Do.* ... *Material of Screw shafts* ... *Identification Marks on Do.*

Material of Steam Pipes steel ... *Test pressure* 45 ✓ ... *Date of test* 3 june

Is an installation fitted for burning oil fuel yes. ... *Is the flash point of the oil to be used over 150°F.* yes ✓ (188,6F)

Have the requirements of the Rules for carrying and burning oil fuel been complied with yes. ✓

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 machinery has been surveyed during erection on board, the workmanship is good and in accordance with the rule requirements.
The engine has been tried at sea and the result found very satisfactary
This installation merit in my opinion the consideration of the Committee fair to have notation of ✠ L.M.C 12.22. inserted in the Register Book.

The amount of Entry Fee ...	£	378 : ✓	When applied for,
Special	£	2645 : ✓	20 Dec 1922
Donkey Boiler Fee ...	£	119 :	When received,
Travelling Expenses (if any)	£	473 :	~~24/1~~/23 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 6 MAR. 1923

Assigned

Certificate (if required) to be sent to ...

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

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