

Report on Steam Turbine Machinery.

No. 666
31 JAN 1955

AUXILIARY

L. 4a.

Date of writing Report 31.12.54 When handed in at Local Office 31.12.54 Port of Rouen Received at London Office
 Date, First Survey 6.4.54 Last Survey 15.11.54 19
 (Number of Visits 8)
 on the "ISIDORA"
 By whom built Ats. & Ch. de Penhoet Yard No. P.15 When built 1954
 By whom made Maison Breguet Engine No. 2353/4 When made 1954
 By whom made Boiler No. When made 1954
 Owners Is Refrigerating Machinery fitted for cargo purposes Port belonging to Is Electric Light fitted
 Horse Power at Full Power 550 Horse Power as per Rule 440
 made for which Vessel is intended aux. machy.

STEAM TURBINE ENGINES, &c.—Description of Engines Two sets of single reduction geared steam turbine
 of Turbines ONE Direct coupled, single reduction geared to propelling shafts No. of primary pinions to each set of reduction gearing ONE
 geared to Alternating Current Generator 3 phase 60 periods per second aux. machy. rated 550 Kilowatts 440 Volts at 1200 revolutions per minute;
 supplying power for driving Propelling Motors Direct coupled, single and double reduction geared to propelling shafts
Kilowatts Volts revolutions per minute

TURBINE	H. P.	I. P.	L. P.	ASTERN.
ADING.				
No. of rows	<u>8</u>			
No. of stages				
No. of rows in each stage				

ft Horse Power at each turbine 550 KW Revolutions per minute, at full power, of each Turbine Shaft 1200
 or Shaft diameter at journals 60 Pitch Circle Diameter 108.48 1st reduction wheel 7820
 in m/m 1713.195 Width of Face 233.8

tance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 75 1st reduction wheel 103.755
 2nd pinion 59 main wheel 668 diameter at bottom of pinion teeth 103.755
 xible Pinion 1st 40 Pinion Shafts, diameter at bearings External 1st 75 2nd 59 diameter at bottom of pinion teeth 103.755
 2nd 40 1st 130 main diameter at wheel shroud, 668 Generator Shaft, diameter at bearings 103.755
 eel Shafts, diameter at bearings 130 668 103.755

Intermediate Shafts, diameter as per rule as fitted Propelling Motor Shaft, diameter at bearings as fitted
 Thrust Shaft, diameter at collars as per rule as fitted
 e Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted
 Is the { tube } shaft fitted with a continuous liner {
 { screw }
 nze 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

eller boss. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.
 e 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.
 o 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
 If so, state type. Length of Bearing in Stern Bush next to and supporting propeller.
 eller, diameter Pitch No. of Bades State whether Moveable. Total Developed Surface square feet.
 ngle Screw, are arrangements made so that steam can be led direct to the L.P. Turbine. Can the H.P. or I.P. Turbines exhaust direct to the

enser. No. of Turbines fitted with astern wheels. Feed Pumps { No. and size How driven
 ps connected to the Main Bilge Line { No. and size How driven
 st Pumps, No. and size. Lubricating Oil Pumps, including Spare Pump, No. and size.
 wo independent means arranged for circulating water through the Oil Cooler. Suctions, connected both to Main Bilge Pumps and Auxiliary
 Pumps, 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.
 e 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.
 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
 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
 g plate. What pipes pass through the bunkers. How are they protected.

How are they protected. Have they been tested as per rule.
 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
 or from one compartment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from.

RS, &c.—(Letter for record. Total Heating Surface of Boilers. Working Pressure.
 ced Draft fitted. No. and Description of Boilers.
 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 4.6.54 Main Boilers Auxiliary Boilers Donkey Boilers

Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements

Geared turbines situated aft. 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

Carbon packing for glands together with springs, governor gear parts etc.

Le Chef des Services de Contrôle:

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building During progress of work in shops - - 6.4.54, 30.4.54, 11.5.54, 1.6.54, 13.8.54, 7.9.54, 26.10.54, 15.11.54 During erection on board vessel - - - Total No. of visits 8

Dates of Examination of principal parts-Casings 30.4.54 Rotors 11.5.54 Blading 13.8.54 Gearing 7.9.54

Wheel shaft 13.8.54 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 fired Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Rotor shaft, Material and tensile strength Alloy steel 95.5 Kg/mm2 Identification Mark 494 E.B.

Flexible Pinion Shaft, Material and tensile strength O.H. steel 76.0 Kg/mm2 Identification Mark R24 ELG.

Pinion shaft, Material and tensile strength Alloy steel 82.8 Kg/mm2 Identification Mark 501 E.B.

; Chemical analysis C 0.325, Si 0.29, Mn 0.45, S, 0.007, P 0.009, Cr 0.83, Ni

If Pinion Shafts are made of special steel state date of approval of chemical analysis, physical properties and heat treatment

1st Reduction Wheel Shaft, Material and tensile strength O.H. Steel 58.2 Kg/mm2 Identification Mark ELG LLOYDS

Wheel shaft, Material Identification Mark 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 Chantiers de Penhoet K.15

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

The above two sets of auxiliary turbine machinery have been constructed under Special Survey at the works of Maison Breguet, Paris in accordance with the approved plans, the Secretary's letters and the Society's Rules. The workmanship is good. They have been dispatched to Ateliers and Chantiers de Penhoet at Saint-Nazaire for installation in the ship.

The amount of Entry Fee ... £ 88.000 Frs When applied for Special ... £ : : 19 Donkey Boiler Fee ... £ : : When received Travelling Expenses(if any) £ 18.000 Frs 12

Committee's Minute

Assigned See Rpt. 44

E. Green.

Engineer Surveyor to Lloyd's Register of Shipping.



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