

Report on Steam Turbine Machinery. No. 21

Received at London Office 28 JUN 1948

Report 24 June 1948 When handed in at Local Office 19 Port of Nantes
 Survey held at Saint-Mazaire Date, First Survey 16 July 1947 Last Survey 19
 (Number of Visits)
 the steel single screw steamer "Saint-Bertrand" ex Chemnitz Tons {Gross 5822
 Net 3310
 Vegesack By whom built Bremer Vulkan Yard No. / When built 1929
 Vegesack By whom made Bremer Vulkan Engine No. / When made 1929
 Vegesack By whom made Bremer Vulkan Boiler No. / When made 1929
 Power at Full Power 4200 IHP Owners French Government Port belonging to Le Havre
 Power as per Rule 646 MN Is Refrigerating Machinery fitted for cargo purposes 92 Is Electric Light fitted Yes
 which Vessel is intended 1. 3 cylinders Reciprocating Steam Engine (3300 IHP) and 1. LP Turbine (900 IHP)

TURBINE ENGINES, &c.—Description of Engines.

Ahead One Direct coupled, single reduction geared to 1 propelling shafts. No. of primary pinions to each set of reduction gearing One
 Astern None double reduction geared
 to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;
 Direct Current Generator
 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.		
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.
						102 7/8	540 7/8				
						142 7/8	570 7/8				
						170 7/8	600 7/8				

Power at each turbine {H.P. 1st reduction wheel
 I.P. 1st reduction wheel
 L.P. 900 I.H.P. main shaft
 diameter at journals {H.P. Pitch Circle 1st pinion 320 7/8 1st reduction wheel 942 7/8 Width of Face 1st reduction wheel 120 7/8
 I.P. Diameter 2nd pinion 320 7/8 main wheel 2 513 main wheel 400 7/8
 L.P. 140 7/8

between centres of pinion and wheel faces and the centre of the adjacent bearings {1st pinion 522 7/8 1st reduction wheel 1246 7/8
 2nd pinion 522 7/8 main wheel 1737 3
 on 1st Pinion Shafts, diameter at bearings External 1st 2nd diameter at bottom of pinion teeth
 2nd Internal 1st 2nd

diameter at bearings {1st 170 7/8 diameter at wheel shroud {1st Generator Shaft, diameter at bearings
 main 410 7/8 main Propelling Motor Shaft, diameter at bearings 15.5"
 Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule 16.2"
 as fitted 15.5" as fitted

diameter as per rule Screw Shaft, diameter as per rule 17.2" Is the {tube } shaft fitted with a continuous liner {Yes
 as fitted 15.5" as fitted 17.2" {screw }
 s, thickness in way of bushes as per rule Thickness between bushes as per rule 0.75" Is the after end of the liner made watertight in the
 as fitted 0.85" as fitted

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

motor 18.37' Pitch 18'0 No. of Blades 4 State whether Moveable Total Developed Surface 102.1 square feet.
 are arrangements made so that steam can be led direct to the L.P. Turbine Yes Can the H.P. or I.P. Turbines exhaust direct to the
 No. of Turbines fitted with astern wheels None Feed Pumps {No. and size 2 diam 3.93" x 27.5" - 1. 11.8" x 8.66" x 23.6"
 How driven Recip. Steam Engine (Main) independent H. Engine

ted to the Main Bilge Line {No. and size 2 diam 4.55" x 12.5" and one 11.1" x 6.3" x 26.6"
 How driven by main steam engine independent steam engine
 ps, No. and size One 11.1" x 14.2" x 26.6" Lubricating Oil Pumps, including Spare Pump, No. and size None
 dependent means arranged for circulating water through the Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary
 No. and size:—In Engine and Boiler Room 2 of 4" diam (ER) 20903 (BR) 10603 (ER) 10603 (BR) In Pump Room

Circulating Pump Direct Bilge Suctions, No. and size 1 of 8.7" diam Independent Power Pump Direct Suctions to the Engine Room
 d size 2 of 4" diam Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes
 uctions 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

connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes
 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
 re they each 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
 Yes What pipes pass through the bunkers None How are they protected

ss through the deep tanks bilge suction pipes Have they been tested as per rule Yes
 Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 nent 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
 one compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Main Deck

BOILERS, &c.—(Letter for record.....) Total Heating Surface of Boilers *9074.052 sq. feet*
Is Forced Draft fitted *Yes* No. and Description of Boilers *3 superheated cylindrical return flame* Working Pressure.....
Is a Report on Main Boilers now forwarded? *Yes*
Is { a Donkey } Boiler fitted? *No* If so, is a report now forwarded? */*
{ an Auxiliary }
Is the donkey boiler intended to be used for domestic purposes only.....
Plans. Are approved plans forwarded herewith for Shafting..... Main Boilers..... Auxiliary Boilers..... Donkey Bo.....
(If not state date of approval)
All plans destroyed by the crew when the vessel was captured.
Superheaters..... General Pumping Arrangements..... Oil Fuel Burning Arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*
State the principal additional spare gear supplied.....

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops - - } *Turbine opened and examined - Reduction gear sent to shop and primed*
{ During erection on board vessel - - }
Total No. of visits *None (for turbine only).*

Dates of Examination of principal parts—Casings *16/7/47* Rotors *11/5/48* Blading *16/7/47* Gearing.....
Wheel shaft *16/7/47* Thrust shaft *25/8/47* Intermediate shafts *23/1/48* Tube shaft *23/1/48* Screw shaft.....
Propeller *23/1/48* Stern tube *23/1/48* Engine and boiler seatings *25/8/47* Engine holding down bolts.....
Completion of fitting sea connections *28/1/48* Completion of pumping arrangements *4/5/48* Boilers fixed..... Engines tried under.....

Main boiler safety valves adjusted..... Thickness of adjusting washers.....

Rotor shaft, Material and tensile strength..... Identification Mark.....

Flexible Pinion Shaft, Material and tensile strength..... Identification Mark.....

Pinion shaft, Material and tensile strength..... Identification Mark.....

1st Reduction Wheel Shaft, Material and tensile strength..... Identification Mark.....

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 *Steel* Test pressure.....

Date of test *November 1947* Is an installation fitted for burning oil fuel *Yes*

Is the flash point of the oil to be used over 150°F *Yes* 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 *No* 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 */* If so, state name of vessel.....

General Remarks. (State quality of workmanship, opinions as to class, &c.) *The L.P. Turbine of this vessel is the machinery described by reports 4 and 5a, in good and efficient condition and eligible, in my opinion, to be classed LMC 6.48 and T.S. 6.48*

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

FRI. 5 NOV 1946

Committee's Minute

Assigned



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