

REPORT ON STEAM TURBINE MACHINERY.

Received at London Office 4 MAY 1934

Date of writing Report 27-4-1934 when handed in at Local Office 19 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 16-1-34 Last Survey 20-4-1934

Reg. Book. on the Exhaust steam turbine SS. MEERKERK (Number of Visits 18)

Tons { Gross Net

Built at Vegesack By whom built Bremer Vulkan Yard No. - When built 1916

Engines made at " By whom made " Engine No. - When made 1916

Boilers made at " By whom made " Boiler No. - When made "

Shaft Horse Power at Full Power - Owners - Port belonging to -

Tom. Horse Power as per Rule - Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

STEAM TURBINE ENGINES, &c.—Description of Engines Exhaust Steam Turbine (Bauer Beach system) No. of Turbines 1
Direct coupled, single or double reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing - 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.

PARTICULARS 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.
1st EXPANSION							99	1148	1			
2nd							120	1190	1			
3rd							140	1230	1			
4th							160	1270	1			
5th							185	1320	1			
6th							210	1370	1			
7th							235	1420	1			

Shaft Horse Power 1530 turbine 1530 Revolutions per minute, at full power, of Turbine Shaft 2700 1st reduction wheel 416/403

in shaft 44. Pitch Circle Diameter, 1st pinion 280.77 mls 2nd pinion 448.773 1st reduction wheel 1822.71 mls main wheel 2347.42 mls

Width of Face, 1st reduction wheel 340 mls main wheel 680 mls Distance between centres of pinion and wheel faces and the centre of the adjacent bearings, pinion Asor F 350 2nd pinion 487 mls 1st reduction wheel Asor F 135 main wheel 590 mls Flexible Pinion Shafts, diameter 1st - 2nd -

Pinion Shafts, diameter at bearings External 1st { 170 2nd { 420 diameter at bottom of teeth of pinion 1st 269.77 mls 2nd 432.25 mls Internal 1st { 170 2nd { 355

Wheel Shafts, diameter at bearings, 1st 300 mls main 445 mls diameter at wheel shroud, 1st 440 mls main 575.10 mls

Generator Shafts, diameter at bearings - Propelling Motor Shafts, diameter at bearings -

Shafting, diameter of Tunnel Shafting as per rule - as fitted 415 mls diameter of Thrust Shafting as per rule - as fitted 450 mls

Diameter of Screw Shaft as per rule - as fitted 465 mls Is the screw shaft fitted with a continuous liner the whole length of the stern tube - Is the after end of the liner -

Is the propeller boss watertight in the propeller boss - If the liner is in more than one length are the joints burned No liner - If the liner does not fit tightly at the -

Between 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 -

It lapped or protected between the liners - Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently -

Length of Propeller 20' 0" No. of Blades 4 State whether Moveable No Total Surface 148.4 square feet. If Single Screw, are -

Arrangements 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 -

of Turbines fitted with astern wheels - Total number of power driven Main and Auxiliary Pumps -

and size of Feed Pumps - How driven - No. and size of Pumps connected to the Main Bilge Line -

driven - No. and size of Ballast Pumps - No. and size of Lubricating Oil Pumps, including -

Oil Pump 2 9' x 8' x 8" Are two independent means arranged for circulating water through the Oil Cooler yes - No. and size of suction -

connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room - and in Holds, &c. -

and size of Main Water Circulating Pump Bilge Suctions - No. and size of Donkey Pump Direct Suctions -

in Engine Room Bilges - 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 connections with the sea direct on the skin of the ship - Are they Valves or Cocks -

Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates - Are the Discharge Pipes above or below the deep water line -

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 -

Are the pipes carried through the bunks. - How are they protected. -

Are all 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 -

Department to another - Is the Screw Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -

LETTERS, &c.—(Letter for record -) Total Heating Surface of Boilers - Working Pressure -

Is Forced Draft fitted - No. and Description of Boilers -

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W299-0139

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

Is a Report on Main Boilers now forwarded?

If so, is a report now forwarded?

Is a Donkey Boiler fitted?

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:— One complete set of bearing bushes for all turbine and gear bearings. One set of internal parts for thrust blocks, a number of turbine blades for each stage. Various coupling etc.
A complete set of spare parts for lubricating oil pumps.
A set of lubricating oil filter elements.

The foregoing is a correct description,

ROTTERDAMSCH E DROOGDOK MAATSCHAPPIJ

Directeur,

Manufacturer.

[Signature]

Dates of Survey while building
During progress of work in shops: 16/1, 19/1, 30/1, 6/2, 8/2, 13/2, 16/2, 20/2, 24/2, 1/3, 8/3, 15/3, 19/3, 21/3
During erection on board vessel: 27/3, 18/4, 29/4
Total No. of visits: 18

Dates of Examination of principal parts: Casings 9/1, 13/2, Rotors 29/1, 9/2, 13/2, 15/2, Blading 16/2, 20/2, 24/2, 1/3, Gearing
Wheel shaft Thrust shaft 29/1, 7/3 Tunnel shafts Screw shaft Propeller
Stern tube Engine and boiler seatings Engines holding down bolts 21/3
Completion of pumping arrangements Boilers fixed Engines tried under steam 20-4-34
Main boiler safety valves adjusted Thickness of adjusting washers
Material and tensile strength of Rotor shaft 32 tons 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 1M steel Identification Mark on Do.
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.
Material of Steam Pipes Test pressure Date of test
Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F.
Have the requirements of the Rules for carrying and burning oil fuel 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.)

This turbine has been made in accordance with the approved plans, Secretary's letters and Society's Rules, and was found in a good working order when tried.

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

The amount of Entry Fee ... £
Exhaust turbine Special Survey and fittings of machinery 450.00
Donkey Boiler Fee ... £
Travelling Expenses (if any) 10.00

When applied for, 19. *[Signature]*
When received, 28/5/34 *[Signature]*

[Signature]
Engineer-in-Charge to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 MAY 1934

Assigned See other
Rob. Rph. 22873