

Report on Steam Turbine Machinery.

No. 9252

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4a. Date of writing Report 4/8 1953 When handed in at Local Office 1953 Port of Stockholm
 Date, First Survey 11.12.1952 Last Survey 6.7.1953
 (Number of Visits 7)
 on the "SAXONSKY" Tons (Gross 13000 Net -)
 Built at Malmö By whom built Kockums Mek. Verkstads AB Yard No. 360 When built 1953
 Engines made at Stockholm By whom made de Laval Engine No. 40733 When made 1953
 Generators made at - By whom made - Generator No. 453502 When made -
 Shaft Horse Power at Full Power 630 Owners North American Shipping & Trading Co. (London Ltd.) Port belonging to -
 Nom. Horse Power as per Rule 126 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -
 Trade for which Vessel is intended -

STEAM TURBINE ENGINES, &c.—Description of Engines. Impulse turbine driving electric generator.

No. of Turbines 1 Direct coupled, single reduction geared to - propelling shafts. No. of primary pinions to each set of reduction gearing 1
 Direct coupled to Alternating Current Generator 3 phase 50 periods per second rated 375 Kilovolt 400 Volts at 1500 revolutions per minute;
 Direct Current Generator Amps.
 Nature of power supply for driving - Propelling Motors, Type -
 Rated - Kilowatts - Volts at - revolutions per minute. Direct coupled, single or double reduction geared to - propelling shafts.

| TURBINE | H. P. | I. P. | L. P. | ASTERN. |
|----------|-----------------------------|-------|-------|---------|
| LADING. | | | | |
| Impulse | No. of rows 6 | - | - | - |
| Reaction | No. of stages - | - | - | - |
| Impulse | No. of rows in each stage - | - | - | - |

Shaft Horse Power at each turbine H.P. 630 I.P. - L.P. -
 Revolutions per minute, at full power, of each Turbine Shaft H.P. 9034 I.P. - L.P. -
 1st reduction wheel - main shaft 1500

Turbine Shaft diameter at journals H.P. 80 & 65 mm Pitch Circle Diameter 1st pinion 103.036 mm 1st reduction wheel - main wheel 620.558 mm
 2nd pinion - main wheel 155 mm 1st reduction wheel - main wheel 200 mm

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 155 mm 1st reduction wheel - 2nd pinion - main wheel 155 mm

Pinion Shafts, diameter at bearings External 1st 80 mm 2nd - diameter at bottom of pinion teeth 1st 98.368 mm 2nd -
 Internal 1st 40 mm 2nd -

Wheel Shafts, diameter at bearings 1st - 2nd - diameter at wheel shroud, main 100 mm main 150 mm
 Generator Shaft, diameter at bearings 110 mm
 Propelling Motor Shaft, diameter at bearings -

Intermediate Shafts, diameter as per rule - as fitted -
 Thrust Shaft, diameter at collars as per rule - as fitted -

Propeller Shaft, diameter as per rule - as fitted -
 Screw Shaft, diameter as per rule - as fitted -
 Is the tube screw shaft fitted with a continuous liner -

Propeller 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 propeller boss -

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -
 If the 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 two 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 -
 Propeller, diameter - Pitch - No. of Blades - State whether Moveable - Total Developed Surface - square feet.

Single 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 condenser -

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

Pumps connected to the Main Bilge Line No. and size - How driven -
 Lubricating Oil Pumps, including Spare Pump, No. and size 1. Direct driven 135 l/m for starting purposes

Two 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 -

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

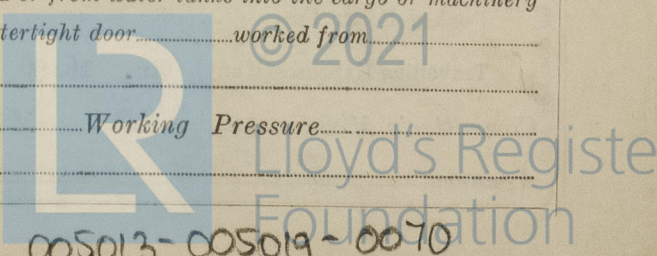
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates - Are the Overboard Discharges above or below the deep water
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel - Are the Blow Off Cocks fitted with a spigot and brass
 ring plate - What pipes pass through the bunkers - How are they protected -

Are pipes pass through the deep tanks - Have they been tested as per rule -
 Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times -

Are the arrangements 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 compartment to another - Is the Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -

Boilers, &c.—(Letter for record -) Total Heating Surface of Boilers -
 Forced Draft fitted - No. and Description of Boilers - Working Pressure -

Report on Main Boilers now forwarded? -



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Is { a Donkey Boiler fitted? 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 3.10.52 Main Boilers Auxiliary Boilers Donkey Boilers.
(If not, state date of approval)
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

The foregoing is a correct description.

AB DE LAVALS ÅNGTURBIN

Huse Sundin

Manufacture

Dates of Survey while building During progress of work in shops - - 11.12.1952, 28.3., 13.4., 7.5., 26.29.6., 6.7.1953.
During erection on board vessel - -
Total No. of visits -
Dates of Examination of principal parts—Casings 28.3.53 Rotors 25.3.53 Blading 11.12.52 Gearing 13.4.53 29.6.53
Wheel shaft 7.5.53 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 fixed Engines tried under steam 26.6.53
Main boiler safety valves adjusted Thickness of adjusting washers
Rotor shaft, Material and tensile strength S.M.Steel 69.4 kg/mm² Identification Mark Lloyds No. 881 25. WAC
Flexible Pinion Shaft, Material and tensile strength Identification Mark
Pinion shaft, Material and tensile strength Electro Steel 84.6 kg/mm² Identification Mark Lloyds No. 3176 26 WAC
; Chemical analysis C=0.30-0.35, CR=2.5-3.0 Mo=0.5 S=0.035 Max, P=0.035 Max.

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment 2.10.1952

1st Reduction Wheel Shaft, Material and tensile strength kg/mm² LLOYDS No. 5569 Identification Mark
Wheel shaft, Material S.M.Steel 66.4 Identification Mark 1.7.52 WAC 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 "SAXONSEA" Yard No. 359.

General Remarks. (State quality of workmanship, opinions as to class, &c.) This Generator Set has been constructed under Special Survey, of tested and approved materials and in accordance with the approved plans, Secretary's letters and the requirements of the Rules. The materials and workmanship are good and the machinery coupled to its electric generator No. 453502 was tested at the Engine Builders Works under full and overload conditions and found satisfactory. Test certificates for materials are attached to this report. The overspeed governor, hand tripping and automatic steam shut off arrangements operated satisfactorily when tested under working conditions.
On completion of the test bed trial the bedding of the gears and the electric welding of the main gear wheel fabric body was examined and found satisfactory.
This machinery is in my opinion suitable for installation in the vessel for which it is intended.

The amount of Entry Fee ... £ : : When applied for
Special ... £r. 350:- : : 1953
Donkey Boiler Fee ... £ : : When received
Travelling Expenses (if any) £r. 16:50 : : 19

Committee's Minute FRIDAY 15 JAN 1954

Assigned Sec Rpt. Ha

Engineer Surveyor to Lloyd's Register of Shipping.



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