

Report on Steam Turbine Machinery. No. 3290.

Date of writing Report 16/12 1953. When handed in at Local Office 22/12 1953. Port of M A L M Ö. Received at London Office 28 DEC 1953.
No. in Survey held at M A L M Ö. Date, First Survey 19/8-1953 Last Survey 17/12 1953.
Reg. Book 40153s on the Single Screw t/t "S A X O N S K Y" (Number of Visits 74)
Liberian Tons (Gross 12.862 Net 7.945)
Built at Malmö. By whom built Kockums Mek. Verkst. A/B Yard No. 360 When built 1953.
Engines made at Stockholm. By whom made A.-B. De-Lavals Ångturbin Engine No. 102 When made 1953.
Boilers made at Malmö. By whom made Kockums Mek. Verkst. A/B Boiler No. 1137 When made 1953.
Shaft Horse Power at Full Power 8100 ✓ Owners Oriental Tanker Corp. S.A. Port belonging to Monrovia.
Nom. Horse Power as per Rule 1620 ✓ Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
Made for which Vessel is intended Open Sea Service.

STEAM TURBINE ENGINES, &c.—Description of Engines.

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

ASTERN.	L. P.	I. P.	H. P.	ASTERN.
No. of rows				
No. of stages				
No. of rows in each stage				

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

Shaft diameter at journals H.P. I.P. L.P. Pitch Circle Diameter 1st pinion 1st reduction wheel 2nd pinion main wheel Width of Face 1st reduction wheel main wheel.

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

Pinion Shafts, diameter at bearings External Internal 1st 2nd diameter at bottom of pinion teeth 1st 2nd.

Generator Shaft, diameter at bearings 1st 2nd Propelling Motor Shaft, diameter at bearings 1st 2nd.

Thrust Shaft, diameter at collars as per rule as fitted Appr. 478 mm. red. to 456 at coupl. as fitted.

Screw Shaft, diameter as fitted appr. 22 mm. as fitted 22 mm. Is the shaft fitted with a continuous liner Yes. 1.

Liners, thickness in way of bushes as fitted 22 mm. Thickness between bushes as fitted 22 mm. Is the after end of the liner made watertight in the liner boss Yes. ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.

liners 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. ---
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 No. ✓ If so, state type 4570 Length of Bearing in Stern Bush next to and supporting propeller 2240 mm.

eller, diameter 6000 mm. Pitch 5886 mm. No. of Blades 4 State whether Movable No. Total Developed Surface 13.0 square feet.

Single Screw, 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 user Yes. ✓ No. of Turbines fitted with astern wheels 1 Feed Pumps No. and size 1-48 T/H, 1-54 T/H & 1-15 T/H How driven Turbine Driven El. driven.

connected to the Main Bilge Line No. and size 1-70 T/H, 2-80 T/H How driven El. driven Steam driven

Pumps, No. and size 2-80 T/H Lubricating Oil Pumps, including Spare Pump, No. and size ---
Independent means arranged for circulating water through the Oil Cooler Yes. ✓ Suctions, connected both to Main Bilge Pumps and Auxiliary pumps, No. and size:—In Engine and Boiler Room 5-100 mm. ✓ In Pump Room 2-3½" & 2-2"

Water Circulating Pump Direct Bilge Suctions, No. and size 1-300 mm. Independent Power Pump Direct Suctions to the Engine Room No. and size 2-125 mm. ✓ Are all the Bilge Suction pipes in Holds and Machinery Space with strum-boxes Yes. ✓

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 Yes. ✓
all Sea Connections fitted direct on the skin of the ship Yes, or on welded boxes. Are they fitted with Valves or Cocks Yes. ✓

they fixed sufficiently high on the ship's side to be seen without lifting the hatch plates Yes. Are the Overboard Discharges above or below the deep water Below Are 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

ring plate Yes. What pipes pass through the bunkers None. ✓ How are they protected ---
at pipes pass through the deep tanks None. ✓ Have they been tested as per rule. ---

all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times. Yes. ✓
The 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

cocks, or from one compartment to another Yes. ✓ Is the Shaft Tunnel watertight None. Is it fitted with a watertight door --- worked from ---

15. BERS, &c.—(Letter for record) Total Heating Surface of Boilers 14294 sq. feet. 12841 sq. feet.
1. Forced Draft fitted Yes. No. and Description of Boilers 2 - Foster Wheeler "D" Working Pressure 490 lbs ✓
92 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 5.6.51. Main Boilers --- Auxiliary Boilers --- Donkey Boilers ---
(If not, state date of approval)
Superheaters --- General Pumping Arrangements 8.2.52. Oil Fuel Burning Arrangements 12.1.53.
Geared turbines situated aft. Have torsional vibration characteristics of system been approved Yes. Date of approval 14.1.52.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes.
State the principal additional spare gear supplied 1 propeller shaft.

The foregoing is a correct description.

KOCKUMS
MEKANISKA VERKSTADS AKTIEBOLAG

S. Sundegren
Manufactured

Dates of Survey while building { During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits 74

Dates of Examination of principal parts—Casings Rotors Blading Gearing
Wheel shaft Thrust shaft Intermediate shafts 16.9.53. Spare shaft 1.4.53. Screw shaft 4.3.53.
Propeller 6.1. & 30.11.53. Stern tube 12.6.53. Engine and boiler seatings 2.7.53. Engine holding down bolts 16.11.53.
Completion of fitting sea connections 2.7.53. Completion of pumping arrangements 2.12.53. Boilers fixed 9.11.53. Engines tried under steam 11.11.53.
Main boiler safety valves adjusted 25.11.53. 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

; Chemical analysis
If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment
1st Reduction Wheel Shaft, Material and tensile strength Identification Mark
Wheel shaft, Material Identification Mark LLOYD'S Nos. 25062/63 Thrust shaft, Material Identification Mark LLOYD'S Nos. 25062/63
Intermediate shafts, Material S.M. Steel Identification Marks LL.16.9.53. Spare shaft, Material S.M. Steel Identification Marks CD. 1.4.53.
Screw shaft, Material S.M. Steel Identification Marks CD. 4.3.53. Steam Pipes, Material S.M. Steel Test pressure 70 kg/cm²
Date of test 11.9 - 26.11.53. 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 Yes.
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Yes. If so, have the requirements of the Rules been complied with Yes.
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 Kockums t/t 359 "SAXONSEA".

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

The machinery of this ship has been built under Special Survey as per Stockholm Surveyors' Report No. 9332 and has been installed at Malmö to my satisfaction.
Straight shafting as per Reports enclosed.
The machinery has been tested under full working conditions with satisfactory results (no excessive gear hammering could be observed). The bedding of the gears of the reduction gearing examined after full speed trials and found satisfactory.
The machinery of this ship is eligible to be classed in the Register Book of this Society
+LMC 12.53, Tail Shaft fitted with CL, 2 W.T. Boilers 490 lbs/sq.inch. Continuous running between 50 - 60 R.P.M. to be avoided.
Photostat copy of the Stockholm Surveyors' Report No. 9332 is enclosed.
Torsiograph records taken from the Shafting is enclosed herewith.

When applied for 22/12 19 53.
When received
Test of turb. casings Kr. 100:-
Special Install. Kr. 2.490:-
SS. of weld. bed plate
Donkey Boiler Kr. 380:-
gear casing & L.P. Kr. 9:50
Travelling Expenses (if any) FRIDAY 13 JAN 1954

Committee's Minute

Assigned +LMC 12.53 (With Torsional End)
2WTB. 490lb. (Std. 455lb.) CL.

A. Warring

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation