

## Report on Steam Turbine Machinery.

No. 21 DEC 1953

Date of writing Report 18, Nov. 1953 When handed in at Local Office 19 Port of Boston, Massachusetts  
 No. in Survey held at Lynn, Massachusetts Date, First Survey 17, July Last Survey 20, October 1953  
 Reg. Book "NAKE NOSTRUM" (Number of Visits 8)  
 on the "NAKE NOSTRUM" Tons (Gross        Net       )  
 Built at Monfalcone, Italy By whom built Cantieri Riuniti Yard No. 1777 When built 1953  
 Engines made at Lynn, Mass. By whom made Dell'Adriatico H.P. 97894 When made         
 Boilers made at        By whom made General Electric Co. Engine No.        When made         
 Shaft Horse Power at Full Power 16,000 Owners Fratelli d'Amico Armatori Gear        Boiler No. 104,801 When made         
 Nom. Horse Power as per Rule        Is Refrigerating Machinery fitted for cargo purposes        Is Electric Light fitted Yes  
 Trade for which Vessel is intended       

## STEAM TURBINE ENGINES, &amp;c.—Description of Engines

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

TURBINE  
BLADING.

	H. P.	I. P.	L. P.	ASTERN.
Impulse Blading				
No. of rows	8	None	8	3
No. of stages	8	None	8	2
Reaction Blading				
No. of rows in each stage				

Shaft Horse Power at each turbine (Referred to prop. shaft) H.P. 8000 L.P. 8000 H.P. 10,000  
 Rotor Shaft diameter at journals H.P. 6-1/2" L.P. 6-1/2" H.P. 14.7266" L.P. 14.7266"  
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings H.P. 15-1/2" L.P. 15-1/2"  
 Flexible Pinion Shafts, diameter at bearings H.P. 7.682" L.P. 9.000"  
 Wheel Shafts, diameter at bearings H.P. 9" L.P. 24"  
 Intermediate Shafts, diameter as per rule as fitted  
 Tube Shaft, diameter as per rule as fitted  
 Screw Shaft, diameter as per rule as fitted  
 Bronze Liners, thickness in way of bushes as per rule as fitted  
 Propeller, diameter        Pitch        No. of Blades        State whether Moveable        Total Developed Surface        square feet.  
 If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Yes Can the H.P. or L.P. Turbines exhaust direct to the Condenser Yes  
 Pumps connected to the Main Bilge Line No. and size How driven  
 Ballast Pumps, No. and size        Lubricating Oil Pumps, including Spare Pump, No. and size         
 Are two independent means arranged for circulating water through the Oil Cooler        Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room        In Pump Room         
 In Holds, &c.        Independent Power Pump Direct Suctions to the Engine Room         
 Main Water Circulating Pump Direct Bilge Suctions, 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 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        What pipes pass through the bunkers        How are they protected         
 What 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         
 Is 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 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         
 Is Forced Draft fitted        No. and Description of Boilers        Working Pressure         
 Is a Report on Main Boilers now forwarded?       

NOTE.—The words which do not apply should be deleted.

4A 4492  
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 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  
State the principal additional spare gear supplied Standard list as specified by the American Bureau of Shipping

The foregoing is a correct description.

Jf Heavne Turbine Engineer  
General Electric Co.

Dates of Survey while building During progress of work in shops - July 17 & 18, Aug. 6, 8, 12 & 14, Oct. 17 & 20, 1953  
During erection on board vessel -  
Total No. of visits 8

Dates of Examination of principal parts Casings July 18, Aug. 14, July 18, Aug. 14, Blading Aug. 14, Gearing Aug. 6  
Oct. 20 Oct. 20 Oct. 20

Wheel shaft Aug. 8 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

Main boiler safety valves adjusted Thickness of adjusting washers

Rotor ~~and~~ Material and tensile strength O.H. Steel - L.P. 104,800 H.P. 125,000 PSI Identification Mark

H.S. Pinion Shaft, Material and tensile strength O.H. Steel H.S. H.P. 146,750 Identification Mark

L.S. Pinion shaft, Material and tensile strength O.H. Steel L.S. H.P. 158,500 Identification Mark

L.S. Pinion shaft, Material and tensile strength O.H. Steel L.S. L.P. 152,000 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 O.H. Steel H.P. 106,250 Identification Mark

Wheel shaft, Material O. H. Steel Identification Mark Thrust shaft, Material O. H. Steel 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 If so, state name of vessel

General Remarks. (State quality of workmanship, opinions as to class, &c.) This machinery has been completed under

Special Survey in accordance with approved plans. The forgings and castings were tested by

A. B. S. Surveyors and for particulars, please refer to attached report. The workmanship

and materials are good. The turbines and gears have been tried out separately in the shop

under no load conditions and found satisfactory. The units have been forwarded to Monfalcone,

Italy.

The amount of Entry Fee ... : : When applied for.  
Special ... 1003 : 60 : 18, Nov. 19 53  
Donkey Boiler Fee ... : : When received.  
Travelling Expenses (if any) 20 : 00 :  
NEW YORK DEC 2 1953  
Committee's Minute  
Assigned Transmit to London

H.P. Turbine No. 97894  
W.S.H.  
LLOYD'S  
8-12-53  
Engineer Surveyor to Lloyd's Register of Shipping.  
L.P. Turbine No. 97896  
LLOYD'S  
601 TB  
20-10-53  
Gear No. 104801  
W.S.H.  
LLOYD'S  
8-8-53  
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Lloyd's Register  
Foundation  
TUESDAY 14 SEP