

AUXILIARY  
REPORT ON STEAM TURBINE MACHINERY. No. 3676

4a.

Received at London Office  
of writing Report. 10 When handed in at Local Office 10 Port of Boston, Massachusetts 20 JUL 1942  
in Survey held at Lynn, Mass. Date, First Survey 31 JAN. 41, Last Survey 7 MAY 1941  
Book. on the Hull No. 4358 S/S "COLINA" (Number of Visits 5)  
Tons } Gross  
Net  
at Sparrows Point, Md. By whom built Bethlehem Steel Co. Yard No. 4358 When built 1941  
Lines made at Lynn, Mass. By whom made General Electric Co. Engine No. 45982 When made 1941  
Boilers made at By whom made Boiler No. When made  
Horse Power at Full Power Owners Port belonging to  
Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes  
Vessel for which Vessel is intended

1 M TURBINE ENGINES, &c.—Description of Engines One turbine connected to 300 KW Generator thru  
Generators single reduction gears.  
of Turbines One single reduction geared to No. of primary pinions to each set of reduction gearing One  
coupled to Direct Current Generator rated 300 Kilowatts 240 Volts at 1200 revolutions per minute;  
plying power for driving Propelling Motors, Type Auxiliary Machinery and Electric Lighting  
Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

BINE	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 Wheel	5"	.96"	25.5"	25.96"	2							
"	5.04"	1.03"	25.5"	25.90"	2							
"	1.374"	2.37"	26.65"	26.76"	2							
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Horse Power at each turbine { H.P. 5636 1st reduction wheel  
I.P. Revolutions per minute, at full power, of each Turbine Shaft I.P. main shaft 1200  
L.P.  
Shaft diameter at journals { H.P. 3-1/2" Pitch Circle { 1st pinion 5.4414" 1st reduction wheel Width of Face { 1st reduction wheel  
I.P. Diameter { 2nd pinion main wheel 25.5585" main wheel 7-1/2"  
L.P.  
Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 6-5/8" & 7-5/8" 1st reduction wheel  
2nd pinion main wheel 6-3/4"  
Pinion Shafts, diameter at bearings { 1st 4" 2nd diameter at bottom of pinion teeth { 1st 5.0664"  
2nd  
Shafts, diameter at bearings { 1st 25.827 Generator Shaft, diameter at bearings 3-1/2"  
main outside of gear main Propelling Motor Shaft, diameter at bearings  
Intermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule  
as fitted  
Shaft, diameter as per rule Screw Shaft, diameter as per rule Is the { tube } shaft fitted with a continuous liner {  
as fitted  
Liners, thickness in way of bushes as per rule Thickness between bushes as per rule Is the after end of the liner made watertight in the  
as fitted  
boss. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner  
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  
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  
Liner, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.  
Belt Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or L.P. Turbine exhaust direct to the  
No. of Turbines fitted with astern wheels Feed Pumps { No. and size  
How driven  
connected to the Main Bilge Line { No. and size  
How driven  
Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size  
independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
No. and size:—In Engine and Boiler Room In Pump Room  
, &c.  
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  
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  
Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
Ship is fitted 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  
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  
es pass through the bunkers How are they protected  
es pass through the deep tanks Have they been tested as per rule  
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  
ent 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?

Is { a Donkey } Boiler fitted?  
{ an Auxiliary }

If so, is a report now forwarded?

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

### SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied Two gear and two pinion bearings, one thrust bearing, fourteen coupling bolts, six turbine casing bolts. One Turbine bearing.

PER SHIP

The foregoing is a correct description,

General Electric Co. J. T. Nolan

Manufacture of p

Dates of Survey while building { During progress of work in shops - - Jan. 31, Feb. 27, Mar. 31, May 6, 7, 1941  
{ During erection on board vessel - - -  
Total No. of visits 5 visits

Dates of Examination of principal parts—Casings May 7, 1941 Rotors May 7, 1941 Blading May 7, 1941 Gearing May 7, 1941

Wheel shaft May 7, 1941 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 shaft, Material and tensile strength O.H.Steel 98,000 lbs. per sq. in. Identification Mark 413 7-5-41

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength O.H.Steel 101,000 lbs. per sq. in. Identification Mark 413 7-5-41

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

Wheel shaft, Material O.H.Steel Identification Mark 413 7-5-41 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) The geared turbine electric generator has been built under Special Survey, tested under steam at full load and the oil governors adjusted to trip at 1340 R.P.M. The quality of workmanship and materials is good. The units have been forwarded to Bethlehem Steel Company, Sparrows Point, Md.

The amount of Entry Fee ... £ : When applied for,  
Special ... £ \$ 75.00 : 14-11-1941  
Donkey Boiler Fee ... £ : When received,  
Travelling Expenses (if any) £ 2.50 : 19

Thomas Baril

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JUL 1 1942

Assigned See First Entry Report



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