

REPORT ON STEAM TURBINE MACHINERY. No. 4262

Received at London Office 18 AUG 1949
 of writing Report 30 March 49 When handed in at Local Office 19 Port of Boston, Massachusetts
 in Survey held at Quincy, Mass. Date, First Survey 16 March Last Survey 29 March 19 49
 Reg. Book _____ (Number of Visits 5) Tons ^{Gross} _____ _{Net} _____
 on the _____
 built at Sparrows Point, Md. By whom built Bethlehem Steel Co. Yard No. 4467 When built 1949
 Engines made at Quincy, Mass. By whom made Bethlehem Steel Co. H.P. Engine No. 7025 When made 1949
 L.P. Engine No. 15825
 Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
 Shaft Horse Power at Full Power 12,500 Owners Gulf Oil Co. Port belonging to _____
 Indicated Horse Power as per Rule 1325 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Name of Vessel _____

STEAM TURBINE ENGINES, &c.—Description of Engines Cross Compound Turbines

No. of Turbines Two ~~XXXXXX~~ } to One propelling shafts. No. of primary pinions to each set of reduction gearing Two
 Astern One ~~XXXXXX~~ } 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 coupled, single or double reduction geared to _____ propelling shafts.

No.	Year	Type	H. P.			L. P. REACTION.			L. P. CONT'D.			ASTERN. IMPULSE		
			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.
1	1949	Imp.	3/4"	29-1/8"	1	1.750"	32.303"	1	3.277"	44.743"	1	3/4"	48-1/8"	1
2	1949	WHEEL	1-3/8"	30"	1	1.800"	33.160"	1	3.965"	46.519"	1	1-1/4"	48-5/8"	1
3	1949	RD	1-1/8"	18-3/4"	5	1.876"	34.016"	1	4.113"	48.295"	1	1-3/4"	49-1/8"	1
4	1949	TH	1-3/8"	19-1/4"	4	1.951"	34.870"	1	4.633"	51.640"	1	2nd Stage		
5	1949	TH	1-5/8"	19-3/4"	4	2.027"	35.728"	1	5.173"	53.869"	1	4"	47"	1
6	1949	TH	1-7/8"	20-1/4"	3	2.102"	36.584"	1	6.074"	56.275"	1	6"	49"	1
7	1949	TH	2-1/8"	20-3/4"	3	2.223"	37.710"	1	7.354"	58.835"	1			
8	1949	TH	2-1/2"	21-1/2"	3	2.370"	38.814"	1	8.722"	61.571"	1			
9	1949	TH				2.516"	39.916"	1	10.250"	64.625"	1			
10	1949	TH				2.662"	41.768"	1						
11	1949	TH				2.808"	42.120"	1						
12	1949	TH				2.954"	43.222"	1						

Shaft Horse Power at each turbine { H.P. 6250 } { H.P. 4700 }
 { I.P. _____ } { I.P. _____ }
 { L.P. 6250 } { L.P. 2600 }
 { _____ } { _____ }
 { _____ } { _____ }
 Shaft diameter at journals { H.P. 5" } { Pitch Circle Diameter { 1st pinion _____ } { 1st reduction wheel _____ }
 { I.P. _____ } { { 2nd pinion _____ } { main wheel _____ } }
 { L.P. 9" } { 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 _____ }
 Movable Pinion Shafts, diameter at bearings { 1st _____ } { External _____ } { 2nd _____ } { diameter at bottom of pinion teeth { 1st _____ }
 { 2nd _____ } { Internal _____ } { _____ } { { 2nd _____ } }
 Wheel Shafts, diameter at bearings { 1st _____ } { diameter at wheel shroud, { 1st _____ } { Generator Shaft, diameter at bearings _____ }
 { main _____ } { { main _____ } { Propelling Motor Shaft, diameter at bearings _____ } }

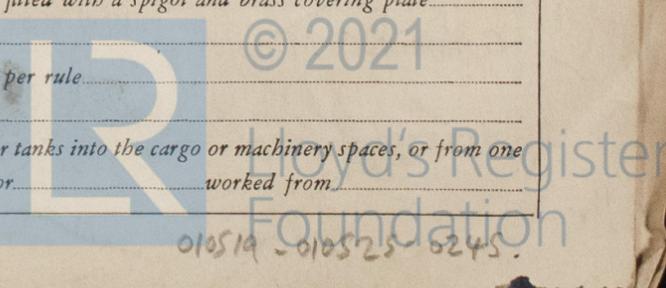
Intermediate Shafts, diameter as per rule _____ Thrust Shaft, diameter at collars as per rule _____ Tube Shaft, diameter as per rule _____
 as fitted _____ as fitted _____ as fitted _____
 New Shaft, diameter as per rule _____ Is the { tube _____ } { shaft fitted with a continuous liner _____ } { Bronze Liners, thickness in way of bushes as per rule _____ }
 as fitted _____ as fitted _____ as fitted _____

Thickness between bushes as per rule _____ 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 _____
 as fitted _____
 New _____ 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 _____
 other appliance fitted at the after end of the tube shaft _____ 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. Turbine 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 _____ }
 Main Pumps, No. and size _____ Lubricating Oil Pumps, including Spare Pump, No. and size _____
 Two independent means arranged for circulating water through the Oil Cooler _____ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge _____
 Pumps, No. and size:—In Engine and Boiler Room _____
 Holds, &c. _____

Main 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 _____
 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 _____
 Are the pipes pass through the bunkers _____ How are they protected _____
 Are the pipes pass through the deep tanks _____ 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 _____
 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 _____



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

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

Is a Report on Main Boilers now forwarded?..... If so, is a report now forwarded?.....

Is { a Donkey } Boiler fitted?..... Main Boilers..... Auxiliary Boilers..... Donkey Boilers.....

Plans. Are approved plans forwarded herewith for Shafting..... (If not state date of approval).....

Superheaters..... General Pumping Arrangements..... Oil Fuel Burning Arrangements.....

Spare Gear. State the articles supplied:—.....

- One complete set of bearing shells and thrust shoes.
- Six H. P. casing joint bolts.
- Eleven L. P. casing joint bolts.
- Six bearing cap studs.

The foregoing is a correct description,

Bethlehem Steel Co. Quincy
by A. W. Gardner

Dates of Survey while building { During progress of work in shops -- } March 16, 17, 23, 28, 29, 1949
{ During erection on board vessel --- }
Total No. of visits 5

Dates of Examination of principal parts—Casings—Mar. 16, 23, 29, 1949 Rotors—Mar. 16, 23, 29, 1949 Blading—Mar. 16, 23, 29, 1949 Gearing—1949

Wheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft..... Screw shaft.....

Propeller..... Stern tube..... Engine and boiler seatings..... Engine holding down bolts.....

Completion of pumping arrangements..... Boilers fixed..... Engines tried under steam.....

L. P. Main boiler safety valves adjusted..... Thickness of adjusting washers..... No. 8138, J.K.H.; 23-9-1949
H. P. Rotor ~~XXX~~, Material and tensile strength 0. H. Steel 85,500
0. H. Steel 108,000 Identification Mark.....

Flexible Pinion Shaft, Material and tensile strength..... Identification Mark.....

Pinion shaft, Material and tensile strength..... Identification Mark.....

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

Wheel shaft, Material..... Identification Mark..... 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.....

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 H. P. and L. P. turbines have been completed under Special Survey in accordance with approved plans. The forgings and castings were tested and for particulars, please refer to attached Certificates. The workmanship and materials are good. The turbines have been tried out in the shop under no load conditions and found satisfactory. The turbines have been forwarded to the Bethlehem Steel Company, Sparrows Point Yard, Sparrows Point, Pa.

Md.

Fee to be set at Baltimore			
The amount of Entry Fee	£	:	When applied for,
Special	£	:	19
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any)	£	\$8.00	19

Thomas Bowie
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned See First Entry Report Bal. 8911 attached

NEW YORK JUL 27 1945