

Report on Steam Turbine Machinery.

No. 127893

Received at London Office **24 NOV 1948**
 Date of writing Report 19... When handed in at Local Office 19... Port of **LIVERPOOL**
 No. in Survey held at **BIRKENHEAD** Date First Survey... Last Survey **30/10/1948**
 Reg. Book... (Number of Visits...)
 on the **Esso LONDON** Tons {Gross 10712, Net 6301}
 Built at **CHESTER PENNSYLVANIA U.S.A.** By whom built **SUN SHIPBUILDING & DRYDOCK** Yard No... When built **1944**
 Engines made at **SCHENACTADY U.S.A.** By whom made **GENERAL ELECTRIC** Engine No. **61819** When made **1944**
 Boilers made at **NEW YORK U.S.A.** By whom made **BABCOCK & WILCOX Co.** Boiler No. **P-9675** When made **1944**
 Shaft Horse Power at Full Power **6000** Owners **ANGLO AMERICAN OIL CO. LTD.** Port belonging to **LONDON**
 Nom. Horse Power as per Rule **1396** **MN=1485** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES**
 Trade for which Vessel is intended...

STEAM TURBINE ENGINES, &c.—Description of Engines. **Turbo-electric drive - 10 Stage Impulse.**

No. of Turbines **One** Direct coupled, single reduction geared } to propelling shafts. No. of primary pinions to each set of reduction gearing...
 Direct coupled to { Alternating Current Generator **3** phase **60** periods per second } rated **4925** Kilowatts **2300** Volts at **3600** revolutions per minute;
 for supplying power for driving **One** Propelling Motors, Type **Synchronous**
 rated... Kilowatts **2300** Volts at **90** revolutions per minute. Direct coupled, single or double reduction geared to **One** propelling shafts.

URBINE		H. P.			I. P.			L. P.			ASTERN.		
LOADING.		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 Expansion		1 3/16 - 1 1/2		2									
2nd		1 1/2		1									
3rd		1 5/8		1									
4th		1 7/8		1									
5th		1 7/16		1									
6th		1 3/16		1									
7th		2 9/8		1									
8th		4 7/16		1									
9th		6 9/8		1									
10th		11		1									
11th													
12th													

Shaft Horse Power at each turbine { H.P. 3600 1st reduction wheel...
 { I.P. main shaft 90
 { L.P. ...

Rotor Shaft diameter at journals { H.P. 5" AFT
 { I.P. 10" FORD
 { 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...

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

Wheel Shafts, diameter at bearings { 1st... diameter at wheel shroud, { 1st... Generator Shaft, diameter at bearings **5.507**
 { main... Propelling Motor Shaft, diameter at bearings **17.25**

Intermediate Shafts, diameter { as per rule... **16.56**
 { as fitted... **16.875** Thrust Shaft, diameter at collars { as per rule... **17.39**
 { as fitted... **17.5**

Tube Shaft, diameter { as per rule...
 { as fitted... Screw Shaft, diameter { as per rule... **18.185**
 { as fitted... Is the { tube } shaft fitted with a continuous liner {
 { screw }

See NEWCASTLE REPORT No 104937 as per rule **0.858**
 Bronze Liners, thickness in way of bushes { as per rule...
 { as fitted... Thickness between bushes { as per rule... **0.643**
 { as fitted... Is the after end of the liner made watertight in the

propeller boss... **yes** 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... **yes** Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft...
 If so, state type... Length of Bearing in Stern Bush next to and supporting propeller...

Propeller, diameter **19'-6"** Pitch **17'-6"** No. of Bades **4** State whether Moveable **No** Total Developed Surface **138.3** square feet.
 If 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 **2-200 G.P.M.** **1-130 G.P.M.**
 { How driven **Steam turbine** **Steam Vertical Simplex**
 Pumps connected to the Main Bilge Line { No. and size **2-200 G.P.M.** **1-450 G.P.M.** **1-300 G.P.M. (Ford pump room)**
 { How driven **Electric** **Steam Vertical Duplex**

Ballast Pumps, No. and size **1-300 G.P.M. (Ford pump room)** Lubricating Oil Pumps, including Spare Pump, No. and size **2-60 G.P.M.**
 Are two independent means arranged for circulating water through the Oil Cooler **yes** Suctions, connected both to Main Bilge Pumps and Auxiliary
 Bilge Pumps, No. and size:—In Engine and Boiler Room **1 @ 3 1/2"** **8 @ 3" (inc motor well)** **4 @ 2 1/2" (boiler flat)** In Pump Room...

In Holds, &c... Main Water Circulating Pump Direct Bilge Suctions, No. and size **1 @ 18"** Independent Power Pump Direct Suctions to the Engine Room
 Bilge, No. and size **2 @ 4"** Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes... **yes**

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... **yes**
 Are all Sea Connections fitted direct on the skin of the ship **No inlet boxes** Are they fitted with Valves or Cocks... **all valves**

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates... **yes** Are the Overboard Discharges above or below the deep water line... **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 covering plate... **No** What pipes pass through the bunkers... **None** How are they protected...
 What pipes pass through the deep tanks... **None** Have they been tested as per rule... **yes**

Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times... **yes**
 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... **yes** Is the Shaft Tunnel watertight... **yes** Is it fitted with a watertight door... **yes** worked from... **Door level**

Rpt. 4

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This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some minor discoloration and a horizontal crease near the top. A dark, irregular stain is visible along the bottom edge.

James H. Smyth
Engineer Surveyor to Lloyd's Register of Shipping.

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