

Report on Steam Turbine Machinery. No. 105723

Received at London Office

ing Report 19... When handed in at Local Office **2 DEC 1948** Port of **NEWCASTLE-on-TYNE**
 Survey held at **WALLSEND** Date, First Survey **28/9/48** Last Survey **8/11/48** 19...
 (Number of Visits **31**)
 on the **TURBO Elec S.S. "ESSO PURFHEET"** Tons (Gross **10,712** Net **6301**)
 CHESTER P.A. By whom built **SUN S.B. & DEYDACK CO** Yard No. When built **1944**
 made at **PITTSBURGH P.A.** By whom made **WESTINGHOUSE Elec Mfg CO** Engine No. **1143** When made **1944**
 made at **NEWYORK** By whom made **BARCOCK & WILCOX** Boiler No. **4053** When made **1944**
 se Power at Full Power **6600** Owners **ANGLO AMERICAN OIL CO LTD** Port belonging to **LONDON**
 se Power as per Rule **14.85** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES**
 which Vessel is intended **CARRYING PETROLEUM IN BULK.**

TURBINE ENGINES, &c.—Description of Engines **TWO SINGLE REDUCTION GEARED IMPULSE TURBINES (Aux)**
 Ahead **ONE** Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing
 Astern double reduction geared
 led to Alternating Current Generator **3** phase **60** periods per second, rated **400** Kilowatts **450** Volts at **1200** revolutions per minute;
 Direct Current Generator
 ing power for driving Propelling Motors, Type
 Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TYPE	H. P.	I. P.	L. P.	ASTERN.
of rows	6			
of stages	5			
of rows in each stage				

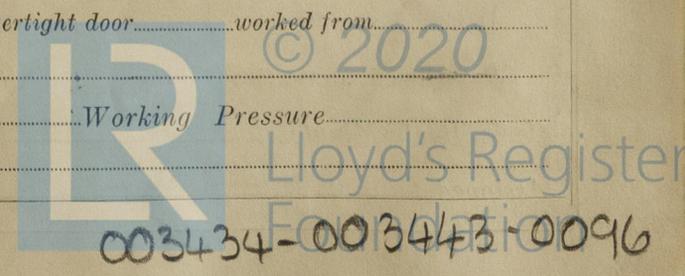
se Power at each turbine { H.P. **700** I.P. L.P. } Revolutions per minute, at full power, of each Turbine Shaft { H.P. **5645** I.P. L.P. } 1st reduction wheel main shaft **1200**
 ft diameter at journals { H.P. **2 1/2"** I.P. L.P. } Pitch Circle Diameter { 1st pinion **5.43"** 1st reduction wheel **25.56"** 2nd pinion main wheel } Width of Face { 1st reduction wheel **8 1/4"** main wheel }
 between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion **6 7/8" & 7 1/2"** 1st reduction wheel **6 3/8"** 2nd pinion main wheel }
 Pinion diameter { 1st 2nd } Pinion Shafts, diameter at bearings { External 1st 2nd } diameter at bottom of pinion teeth { 1st **5.125"** 2nd }
 shafts, diameter at bearings { 1st **4"** main } diameter at wheel shroud, { 1st main } Generator Shaft, diameter at bearings **4"** Propelling Motor Shaft, diameter at bearings

iate Shafts, diameter as per rule... as fitted... Thrust Shaft, diameter at collars as per rule... as fitted...
 ft, diameter as per rule... as fitted... Screw Shaft, diameter as per rule... as fitted... Is the { tube } shaft fitted with a continuous liner { screw }
 liners, thickness in way of bushes as per rule... as fitted... Thickness between bushes as per rule... as fitted... Is the after end of the liner made watertight in the boss...
 er 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...
 ers 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...
 r, diameter... Pitch... No. of Bades... State whether Moveable... Total Developed Surface... square feet.
 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

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 both to Main Bilge Pumps and Auxiliary
 mps, No. and size:—In Engine and Boiler Room... In Pump Room...
 &c.

ater Circulating Pump Direct Bilge Suctions, No. and size... Independent Power Pump Direct Suctions to the Engine Room
 o. and size... Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes...
 ilge 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...
 ea Connections fitted direct on the skin of the ship... Are they fitted with Valves or Cocks...
 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
 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
 plate... What pipes pass through the bunkers... How are they protected...
 pes pass through the deep tanks... Have they been tested as per rule...
 ing. Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times...
 rangement 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
 r from one compartment to another... Is the Shaft Tunnel watertight... Is it fitted with a watertight door... worked from...

S, &c.—(Letter for record... Total Heating Surface of Boilers... Working Pressure...
 ed Draft fitted... No. and Description of Boilers...
 ort on Main Boilers now forwarded?



Is a Donkey Boiler fitted? If so, is a report now forwarded?
 an Auxiliary Boiler fitted?
 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? **YES**

State the principal additional spare gear supplied ~~_____~~

The foregoing is a correct description, _____

Manufactured _____

Dates of Survey while building: During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits **31**
 SEE REPORT LA
 Dates of Examination of principal parts—Casings _____ Rotors _____ Blading _____ Gearing _____
 Wheel shaft _____ 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 _____ 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 analysis, physical properties and heat treatment _____
 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 _____
 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 **T.S. Yankeri.**

General Remarks. (State quality of workmanship, opinions as to class, &c.) **These machines have been constructed under the supervision of the U.S. Coast Guard and the American Bureau of Shipping. The workmanship is good and the materials considered sound. The machines have been examined under working conditions and found satisfactory.**

The amount of Entry Fee	£	:	:	When applied for
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received
Travelling Expenses (if any)	£	:	:	19

J.D. Antypin
 Engineer Surveyor to Lloyd's Register of Shipping.



(The Surveyors are requested not to write on or below the space for Committee's Minute.)
 Committee's Minute **See minute on fe machy r/f.**
 Assigned _____

FEB 4 FEB 1949

Certificate (if required) to be sent to _____