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Report on Steam Turbine Machinery.

Lon: 123321

No. 20907

7-AUG-1952

Boilers... writing Report 19/10/1951 When handed in at Local Office 19/10/1951 Port of Southampton & London
 Survey held at Southampton & Bedford Date, First Survey (Su) 22/2/51 Last Survey 3/9/51 (Su) 19
 on the S.S. "BRITISH CROWN" (Lm) 2/10/51 (Number of Visits 3 (Lm) 16/10/51 (Lm) 19
 at BIRKENHEAD. By whom built CAMMELL LAIRD & CO LTD. Yard No. 1208 When built
 es made at BEDFORD. By whom made W.H. ALLEN, SONS & CO LTD. Engine No. 7/81933 When made 1951.
 s made at By whom made Boiler No. When made
 Horse Power at Full Power 920 Owners BRITISH TANKER CO. Port belonging to
 Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 for which Vessel is intended OIL TANKER.

TURBINE ENGINES, &c.—Description of Engines. TURBO-ALTERNATORS.

Turbines 2 Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing 1
 coupled to Alternating Current Generator 3 phase 60 periods per second rated 600 Kilowatts 440 Volts at 1,800 revolutions per minute;
 Direct Current Generator
 supplying power for driving Propelling Motors, Type
 Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

	H. P.			I. P.			L. P.			ASTERN.		
Expansion	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.
	437	18.625	1									
	875	19.125	1									
	375	18.625	1									
	5	18.75	1									
	781	19.0	1									
	1187	19.375	1									
	2.0	20.25	1									
	3.0	21.25	1									
	4.0	23.0	1									

H.P. 1150 - 25% OVERLOAD. H.P. 7,000 1st reduction wheel 1,800
 I.P. Revolutions per minute, at full power, of each Turbine Shaft I.P. main shaft
 L.P.

Shaft diameter at journals H.P. 2.5 - 5.5 Pitch Circle Diameter 1st pinion 4.9182 1st reduction wheel 19.0766 Width of Face 1st reduction wheel 2 x 5.0
 I.P. 2nd pinion main wheel
 L.P.

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 5.0 5.0 1st reduction wheel 5.25 6.25
 2nd pinion main wheel

Pinion Shafts, diameter at bearings External 1st 4.0 - 7.0 2nd diameter at bottom of pinion teeth 1st 4.6742
 Internal 1st 4.0 - 8.0 2nd
 1st 4.0 - 5.0 4.5 - 5.0 Generator Shaft, diameter at bearings 4.0 - 5.0
 main diameter at wheel shroud, main Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter as per rule as fitted Thrust Shaft, diameter at collars as per rule as fitted 5.0 - 6.0
 Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the tube screw shaft fitted with a continuous liner

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

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

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

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

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

Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room
 s, No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes.

he 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.

hey 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
 ing plate. What pipes pass through the bunkers. How are they protected.

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
 s, or from one compartment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from.

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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
an Auxiliary } Boiler fitted? 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.

The foregoing is a correct description.

H. Y. Britten for. W. H. ALLEN, SONS & CO LTD.

Manu

Dates of Survey while building	{	During progress of work in shops - - -	22 nd FEBRUARY 1951 - 3 rd SEPTEMBER 1951 - 19.
		During erection on board vessel - - -	1951: OCT 2. 10. 16 (London)
		Total No. of visits	19 In Shops (Sh.) 3 In Shops (Sh.)

Dates of Examination of principal parts—Casings.		Rotors.		Blading.		Gearing.	
STEAM CHEST. No 1	22. 2. 51.	STEAMER BODY.	21. 2. 51.	CONDENSER.	24. 4. 51.	AIR PUMP.	23. 1. 51.
" " No 2	14. 2. 51.	" " "	21. 2. 51.	" " "	24. 4. 51.	" " "	3. 4. 51.
OIL PUMP.	2. 4. 51.						
	10. 4. 51.						
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..... **S.M.O.H. STEEL**

Flexible ~~Material~~ ^{COUPLING}; Material and tensile strength **S.M.O.H. STEEL**

Pinion shaft, Material and tensile strength.....S.M.O.H. STEEL

MAN GEAR
1. Wheel Shaft, Material and tensile strength. S.M.O.H. STEEL

Wheel shaft Material: **5 M Q L STEEL** Identification: **N 2 1 1 N: 7 9 8 5 0 2 2 7 6 5 0**

GEAR COUPLING
Lab. ~~XXXXXXXXXX~~ Material SM 401 STEEL Identification NB/ LI. NO 2160 FB. 177.50
NB/ LI. NO 2161 FB. 177.50

Screw shaft, Material.....Identification Marks

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.) *These engines have been built under*

Special Shower in accordance with the Secretary's letters, Rule requirements and approved plans. Materials and workmanship are good. These engines are eligible in my opinion to be installed on board a blessed vessel.

The Turbo Generator sets have been tested upon the bench under full and overload conditions with satisfactory results.

These sets have been properly installed with the vessel a
 1/2" Savape H# 10, 1/4
 3.4 exps.

Long 120.8.8
1:10:9 exps.

The amount of Entry Fee 2 Feb 61 £ 61 : 6 When applied for

Special £ : : 19/10/1951

Donkey Boiler Fee	...	£	:	:	When received
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Travelling Expenses (if any) £ 1 3. 4. (Son) 19

Committee's Minute.....

Assigned

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