

Aux
Report on Steam Turbine Machinery. No. 125636

Received at London Office 22 NOV 1952
g Report 21 OCT 1952 When handed in at Local Office 21 OCT 1952 Port of LONDON
Survey held at PETERBOROUGH Date, First Survey 1st July Last Survey 9th Sept 1952
(Number of Visits 8)

n the Tw. sc. s/s "BRAEMAR CASTLE" Tons {Gross
Net

By whom built Harland & Wolff Ltd Yard No. 1459 When built
By whom made Peter Brotherhood Ltd Engine No. 20600 E When made 1952-9

By whom made Boiler No. When made
e Power at Full Power Owners Union Castle Mail S.S. Co. Ltd Port belonging to
e Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

which Vessel is intended

TURBINE ENGINES, &c.—Description of Engines Horizontal Multi-stage impulse type

Ahead Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing
Astern double reduction geared

to Alternating Current Generator phase periods per second
Direct Current Generator rated 750 Kilowatts 225 Volts at 800 revolutions per minute;

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.		
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.
0.4	22.825										
1.76	23.885										
0.845	22.97										
0.945	23.07										
1.11	23.235										
1.67	23.795										
2.47	25.395										
3.16	26.285										
4.85	28.475										

Power at each turbine H.P. 6000 1st reduction wheel
I.P. 800 main shaft

Revolutions per minute, at full power, of each Turbine Shaft
H.P. 3 1/2
I.P. 800
L.P. 800

Pitch Circle Diameter 1st pinion 6.10847 1st reduction wheel
2nd pinion main wheel 45.8846 1st reduction wheel
9 3/8 1st reduction wheel

Generator Shaft, diameter at bearings
Propelling Motor Shaft, diameter at bearings

Thrust Shaft, diameter at collars
Screw Shaft, diameter

Is the tube shaft fitted with a continuous liner
Is the after end of the liner made watertight in the

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller
Pitch No. of Bades State whether Moveable Total Developed Surface square feet

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 Lubricating Oil Pumps, including Spare Pump, No. and size One

dependent means arranged for circulating water through the Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary

No. and size:—In Engine and Boiler Room In Pump Room

Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes
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

connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
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

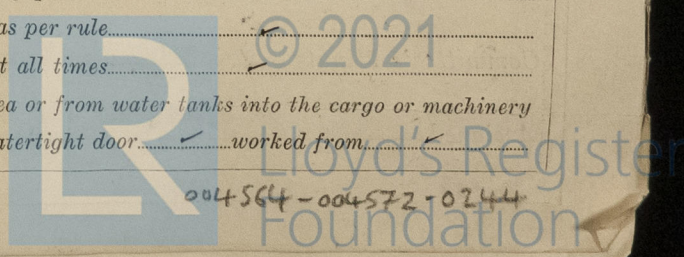
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass

What pipes pass through the bunkers How are they protected
pass through the deep tanks Have they been tested as per rule

Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times

ment 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

one compartment 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.....* *Report.....*

Is a Report on Main Boilers now forwarded?

Is $\left\{ \begin{array}{l} \text{a Donkey} \\ \text{an Auxiliary} \end{array} \right\}$ 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.....at _____
(If not, state date of approval)

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

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... Yes

State the principal additional spare gear supplied. One set gland packings

1 oil strainer, 1 governor valve, spindles and seat and set of wearing parts.

1 set all springs. 1 set air ejector nozzle.

1 extraction pump, and circulating pump, impellers, shaft, and packing.

1 closed feed valve, float and lever

The foregoing is a correct description.

Dates of Survey while building	{	During progress of work in shops - -	July 1 st Aug 15. 22. 26. 29. Sept 1. 5. 9.
		During erection on board vessel - -	
		Total No. of visits	Eight. (in shops)

Dates of Examination of principal parts—Casings 22. 26. 8. 52 Rotors..... ✓ Blading..... Gearing..... ONE.

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 strength

Main boiler safety valves adjusted..... Thickness of adjusting washers..... length

Rotor shaft, Material and tensile strength Siemens Martin Steel. 56.0 Tons / D. Identification Mark Llenc ates

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

Pinion shaft, Material and tensile strength..... *Siemens Steel*..... *44.6/46.2 tons/in.²*..... Identification Mark..... *7D.C.D. A*

1st Reduction Wheel ^{Rings} ~~Shaft~~, Material and tensile strength... *Siemens Steel.* 32.8/31 Tm / G. Identification Mark *TEP. 626*

Wheel shaft, Material *Siemens steel* Identification Mark *Lloyds 460.65* 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.....F. A. T.

Date of test 9th Sept 1952. Is an installation fitted for burning oil fuel. ☒ 11/8

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.....FORG

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.....✓..... pay of

General Remarks (State quality of workmanship, opinions as to class, &c.)

This turbo generator has been built under survey in accordance with approved plans and to the requirements of the Rules. Steel used in its manufacture has been made at works approved by the Laminar Division of the Society's Surveyors. The workmanship is good and the generator is of a type to be fitted aboard a vessel classed with this Society.

Satisfactory ship trials have been held at the Staten work, but overload tests were unsatisfactory due to faultless not being available and should be completed after spring p
work in
ring en

The turbine is connected to Herbrand's Wolff General N^o 10485, and the set is to be
labeled the ³/₄ "BRAEMAR CASTLE."

The amount of Entry Fee	... £	32	:	0	:	0	When applied for.
Special	... £	:	:	:	:	21 OCT 1952	
Donkey Boiler Fee	... £	:	:	:	:	19	When received.
Travelling Expenses (if any)	£	5	:	5	:	19	

Committee's Minute

Assigned *See F. E. Mch. 24. 12. 15. 66* *B. Small*

Lloyd's Register