

REPORT ON MACHINERY.

Bel 9363

No. 44666

27 MAY 1925

Received at London Office

Date of writing Report 19 When handed in at Local Office 22/57 1925 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 18.9.24 Last Survey 1-5-1925
Reg. Book. on the New Steel Y/S S. Invercaigo (Number of Visits 11/10)
Master Built at Belfast By whom built Harland & Wolff (Nº 701) Tons Gross 1925
Engines made at Glasgow By whom made A. & J. Inglis Ltd (Nº 701) when made 1925
Boilers made at Belfast By whom made Harland & Wolff Ltd when made 1925
Registered Horse Power Owners L. & G. Shipping Coy Ltd Port belonging to London
Nom. Horse Power as per Section 28 196 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Triple expansion No. of Cylinders 6 No. of Cranks 6
Dia. of Cylinders Twin 13½" 23½" 36" Length of Stroke 27" Revs. per minute Dia. of Screw shaft as per rule Material of screw shaft as fitted
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight
in the propeller boss If the liner is in more than one length are the joints burned 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 Length of stern bush
Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule 7½" Dia. of Crank pin 7½" Size of Crank webs 4½" 14½" Dia. of thrust shaft under
collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface
No. of Feed pumps 2 Diameter of ditto 3¼" Stroke 13½" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3¼" Stroke 13½" Can one be overhauled while the other is at work yes
No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes 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
What pipes are carried through the bunkers How are they protected
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel
Total Heating Surface of Boilers 37020 sq ft Is Forced Draft fitted No. and Description of Boilers
Working Pressure 180 Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules Steam dome: description of joint to shell % of strength of joint
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W1636-0170

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two connecting rod top end bolts and nuts, two connecting rod bottom end bolts and nuts, two main bearing bolts, one set of feed and barge pump valves, air pump bucket, rod and valves, circulating pump bucket, rod and valves, two eccentric straps, one set of packing rings for each HP & MP cylinder, one set of packing rings for each IP piston valve.

The foregoing is a correct description,

A. & J. INGLIS LIMITED.

John Walker, Junr. Secy.

Manufacturer.

Dates of Survey while building

During progress of work in shops ---
During erection on board vessel ---
Total No. of visits

1924. Sept. 18 Dec 17. 1925. Jan. 14. 16 Feb 3. 26. Mar 2. 25. Apr 7. 15
May 1.
11.

Is the approved plan of main boiler forwarded herewith no

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 25-3-25 Slides 7-4-25 Covers 2-3-25 Pistons 25-3-25 Rods 7-4-25

Connecting rods 7-4-25 Crank shaft 15-4-25 Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____

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

Completion of fitting sea connections _____ Stern tube _____ Screw shaft and propeller _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material of Crank shaft Imp. Steel Identification Mark on Do. LLOYD'S 18701 L.C.D. 154-25 Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

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 Section 49 of the Rules been complied with _____

Is this machinery duplicate of a previous case _____ If so, state name of vessel _____

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

The workmanship and materials are good.
The engines have been constructed under special Survey in accordance with the Rules. They have been sent to Belfast to be fitted in the vessel.
Engines fitted in the vessel & tried under steam see separate report.

Certificate (if required) to be sent to _____

The amount of Entry Fee ... £ 3 : :
Special £19 : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 22/5/1925
When received, 30/5/1925

Committee's Minute

Assigned Deferred

S. Davis William Butler

Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 23 JUN 1925

GLASGOW 26 MAY 1925

see Bel 26. 9363
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