

Rpt. 4.

REPORT ON MACHINERY

No. 45151

11 NOV 1925

Received of London Office

Date of writing Report 30-10-1925 When handed in at Local Office 10-11-1925 Port of Glasgow

No. in Survey held at Coathbridge + Glasgow Date, First Survey 29th April 1924 Last Survey 24th Oct 1925
Reg. Book. on the Engine No. 611. (Number of Visits 19)

Master Built at Salt Bommel By whom built The James Meyer S.B. Co. Tons Gross Net
Engines made at Coathbridge By whom made Wm Beardmore & Co. (611) when made 1924
Boilers made at Glasgow By whom made Wm Beardmore & Co. (178) when made 1924
Registered Horse Power Owners The James Dredging Co. Ltd. Port belonging to
Nom. Horse Power as per Section 28 110 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 15", 20", 40" Length of Stroke 27" Revs. per minute Dia. of Screw shaft as per rule as fitted Material of screw shaft
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 7.45" as fitted Dia. of Crank shaft journals as per rule 7.825" as fitted Dia. of Crank pin 8" Size of Crank webs 5" x 15 1/2" Dia. of thrust shaft under collars 8" Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface
No. of Feed pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work In
No. of Bilge pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work In
No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3 In Holds, &c.

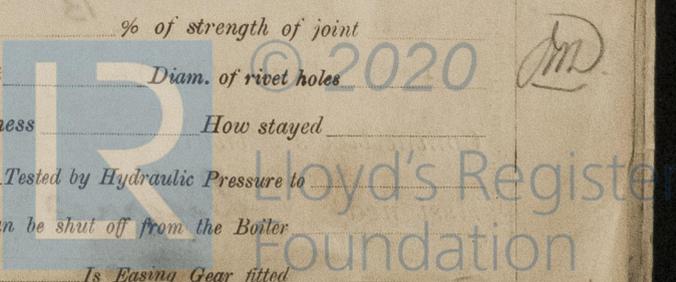
No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
Are all connections 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 3) Manufacturers of Steel Plates Wm Beardmore & Co. Ltd. Rounch David Colville & Sons Ltd.
Total Heating Surface of Boilers 1980 sq ft Is Forced Draft fitted No. and Description of Boilers One single inclined, return tubes
Working Pressure 180 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 27-8-24 No. of Certificate 16587
Can each boiler be worked separately Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to each boiler 2 - direct spring Area of each valve 7.06 sq ft Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork net 30" Mean dia. of boilers 14-0" Length 11-6" Material of shell plates Steel
Thickness 1 1/2" Range of tensile strength 28/32 ton Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1/4" Pitch of rivets 8 7/8" Lap of plates or width of butt straps 18 1/2"
Per centages of strength of longitudinal joint rivets 96% Working pressure of shell by rules 180 lbs. Size of manhole in shell 15 1/2" x 19 1/2"
plate 85% Size of compensating ring 2-10 x 2-6 x 1 1/2" No. and Description of Furnaces in each boiler 2 Brighton Material steel Outside diameter 4-4 1/4"
Length of plain part top Thickness of plates crown 5/8" Description of longitudinal joint weld No. of strengthening rings
bottom Thickness of plates bottom 5/8" Working pressure of furnace by the rules 185 lbs. Combustion chamber plates: Material steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 1 5/8"
Pitch of stays to ditto: Sides 8 1/2" x 9 1/2" Back 8 1/2" x 9 1/2" Top 8 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbs.
Material of stays steel Area at smallest part 1 1/2" x 2" Area supported by each stay 83.5 sq ft Working pressure by rules 182 lbs. End plates in steam space:
Material steel Thickness 1 1/2" Pitch of stays 20" = 17 1/2" How are stays secured double nuts Working pressure by rules 180 lbs. Material of stays steel
Area at smallest part 2 1/4" x 3" Area supported by each stay 306 sq ft Working pressure by rules 180 lbs. Material of Front plates at bottom steel
Thickness 7/8" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 24" Working pressure of plate by rules 180 lbs.
Diameter of tubes 3 1/2" Pitch of tubes 4 1/4" x 4 5/8" Material of tube plates steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 11"
Pitch across wide water spaces 14 1/4" Working pressures by rules 181 lbs. Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2-8 1/8" x 7/8" Length as per rule 2-10" Distance apart 9 3/4" Number and pitch of stays in each 3 - 8 3/4"
Working pressure by rules 200 lbs. 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

If not, state whether, and when, one will be sent

Is a Report sent on the Hull of the Ship?



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED.

Manufacturer.

Thousson

Dates of Survey while building

{ During progress of work in shops - - { During erection on board vessel - - - { Total No. of visits	1924 Apr 29 May 20-29 June 4-19 July 1-30 Aug 22-29 Sep 16 Oct 8-16 21 Nov 12-19
	1925 Sep 21-23 Oct 24. (Boiler 1924 Apr 7-14-17 May 1-15-23-26 June 2-26 July 9-14-16 Aug 15-27)
	E. 19 R. 14.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 15-10-24 Slides 15-10-24 Covers 15-10-24 Pistons 30-7-24 Rods 29-8-24

Connecting rods 29-8-24 Crank shaft 22-8-24 Thrust shaft 27-10-25 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 *steel* Identification Mark on Do. *E 611 22-8-24* Material of Thrust shaft *steel* Identification Mark on Do. *371 27-10-25*

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 *HOPPER - No 32433. Glasgow Repal No 44416.*

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

The Engine & Boiler have been constructed under Special Survey in accordance with the approved Plan & Rules.

The materials and workmanship are good.

The machinery which has been dispatched to the, The James Meyer Shipbuilding Company, Zalt Bommel, Holland, will be eligible in my opinion, for notation + L.M.C. with date, when the machinery has been efficiently fitted on board the vessel and tried under working conditions with satisfactory results.

? Oil gland.

The amount of Entry Fee $\frac{7}{8}$ £ 11 : 0 : 0

Special ... *B.R.* £ 4 : 4 : 0

Donkey Boiler Fee ... £ 13 : : 0

Travelling Expenses (if any) £ : : 0

Committee's Minute *GLASGOW 10 NOV 1925*

Assigned *Deferred*

When applied for, *10 NOV 1925*

When received, *20/2/26*

Engine Surveyor to Lloyd's Register of Shipping. *J. J. Bell*

FRI. 6 AU. 1925

See Ref. 264pt No 15418

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Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.