

REPORT ON MACHINERY.

No. 18129

Received at London Office

WFO. 3 OCT. 1923

Date of writing Report 28th Sept 1923 When handed in at Local Office 29th Sept 1923 Port of Greenock
No. in Survey held at Port Glasgow Date, First Survey 14th March Last Survey 27th Sept 1923
Reg. Book. on the Non-Propelling Bucket Dredger "PERSEVERE" (Number of Visits 23) Tons { Gross 581.56
Net 514.85
Master ✓ Built at Port Glasgow By whom built Ferguson Brothers (Port Glasgow) Ltd. When built 1923
Engines made at Port Glasgow By whom made Ferguson Brothers (Port Glasgow) Ltd. when made 1923
Boilers made at Glasgow By whom made D. Rowan & Co. Ltd. when made 1923
Registered Horse Power ✓ Owners The Commissioners of the Harbours and Docks of Leith Port belonging to Leith
Nom. Horse Power as per Section 28 107 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 16" 9 3/4" Length of Stroke 24" Revs. per minute 120 Dia. of Screw shaft as per rule 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 Dia. of Crank shaft journals as per rule Dia. of Crank pin 7 5/8" Size of Crank webs 1 1/2" x 5 1/4" 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 2 3/4" Stroke 12" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 3 Sizes of Pumps 10 5/8" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps 4 @ 2 1/4"
In Engine Room 3 @ 2" Bl. Lin 2 @ 2" In Holds, &c. 4 @ 2 1/4"
No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size Yes - 3"
Are all the bilge suction pipes fitted with roses ✓ Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible ✓
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line above
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
What pipes are carried through the bunkers Steam exhaust pipes to after winches How are they protected lagged & covered with W.I. casing
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Port Talbot Steel Co. Ltd.

Total Heating Surface of Boilers 23580 sq. ft. Is Forced Draft fitted No No. and Description of Boilers Two S.E.
Working Pressure 160 lb/sq. in. Tested by hydraulic pressure to ✓ Date of test ✓ No. of Certificate —
Can each boiler be worked separately Yes Area of fire grate in each boiler ✓ No. and Description of Safety Valves to each boiler 2 S.E. Area of each valve 4 9/16" Pressure to which they are adjusted 165 lb/sq. in. Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 5'-6" Int. dia. of boilers 11'-5 1/2" Length 10'-6" 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 ✓ Working pressure of shell by rules ✓ Material ✓ Outside diameter ✓
Size of compensating ring ✓ No. and Description of Furnaces in each boiler ✓ No. of strengthening rings ✓
Length of plain part ✓ Thickness of plates ✓ Description of longitudinal joint ✓ No. of manhole in shell ✓
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 ✓ End plates in steam space: ✓
Material of stays ✓ Area at smallest part ✓ Area supported by each stay ✓ Working pressure by rules ✓ Material of stays ✓
Material ✓ Thickness ✓ Pitch of stays ✓ How are stays secured ✓ Working pressure by rules ✓ Material of Front plates at bottom ✓
Area at smallest part ✓ Area supported by each stay ✓ Working pressure by rules ✓ Working pressure of plate by rules ✓
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 None 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 ✓

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:— 2 top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts and nuts, iron of various sizes.

The foregoing is a correct description,

FERGUSON BROTHERS (PORT-GLASGOW) LTD.,

J. Ferguson

DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1923 March 14 21. Apr. 2 10 16 23 May 1 8 15 24 31 June 6 11 20 July 17 24 Aug. 13 17 29 Sept. 7
During erection on board vessel - - - 22 25 27
Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith

Yes with G.R. Rpt. 42821

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 24.5.23 Slides 24.5.23 Covers 15.23 Pistons 15.5.23 Rods 31.5.23

Connecting rods 15.5.23 Crank shaft 1.5.23 Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓

Stern tube ✓ Steam pipes tested 8.8.23 Engine and boiler seatings 11.6.23 Engines holding down bolts 7.9.23

Completion of pumping arrangements 27.9.23 Boilers fixed 7.9.23 Engines tried under steam 25.9.23

Completion of fitting sea connections 7.9.23 Stern tube ✓ Screw shaft and propeller ✓

Main boiler safety valves adjusted 25.9.23 Thickness of adjusting washers Port-Blr { S.P.V. 2 3/4" } S.P.V. 1 1/2" } Star-Blr. { S.P.V. 2 3/4" } S.P.V. 1 1/2" }

Material of Crank shaft S Identification Mark on Do. 9786 R.F. S.F.D. 1.5.23 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 lapwelded iron and S.D. Copper. Test pressure Iron 480 lbs/12" Copper 350 lbs/12"

Is an installation fitted for burning oil fuel No 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 No If so, state name of vessel ✓

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

The engines of this vessel have been built under Special Survey and the materials and workmanship are good. The Boiler (see G.R. Rpt. 42821) and engines have been well fitted and secured on board, tried under steam and found in a good and efficient condition.

The machinery of this vessel is eligible in my opinion for the record of + N.B. 9.23 (in red)

It is submitted that this vessel is eligible for THE RECORD. + N.B. 9.23.

8/10/23. C.M.S.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for,
Special 3/5.. ... £ 16 : 1 : 0 20 Sept 1923
Donkey Boiler Fee ... £ - : - : -
Travelling Expenses (if any) £ - : - : -

S. F. Dorey.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 2-OCT 1923

Assigned + N.B. 9.23.



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