

## REPORT ON MACHINERY.

No. 30267  
WED. 14 JUN 1911

Received at London Office

Date of writing Report 1. 6. 1911 When handed in at Local Office 10/6/11 Port of Glasgow.  
No. in Survey held at Parsly Date, First Survey 5/12/10. Last Survey 6/6/1911  
Reg. Book. on the Non-propelling Dredger "India" (Number of Visits) Gross 423.  
Master Built at Parsly By whom built Fleming Ferguson Ltd. (1897) Tons Net 371.  
Engines made at Parsly By whom made Fleming Ferguson Ltd. 1897 when made 1911  
Boilers made at ditto By whom made ditto when made 1911  
Registered Horse Power Owners Port of London Authority Port belonging to London  
Nom. Horse Power as per Section 28 112. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders 2 No. of Cranks 2  
Dia. of Cylinders 20" x 2" Length of Stroke 24" Revs. per minute 90 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 as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin 9" Size of Crank webs 16 1/2 x 6 1/2 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 Stroke 12" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 8" Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 2 Sizes of Pumps 6 x 6 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 3-2" Stoheld 3-2" In Holds, &c. After 1-2" Fore 4-2"

No. of Bilge Injections 1 sizes 4" Connected to condenser or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2 1/2"  
Are all the bilge suction pipes fitted with roses Yes 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 bolts  
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 alone  
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 None How are they protected  
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  
Dates of examination of completion of fitting of Sea Connections 29-3-11 of Stern Tube Screw shaft and Propeller  
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 6) Manufacturers of Steel Colville & Sons  
Total Heating Surface of Boilers 2202 Is Forced Draft fitted No No. and Description of Boilers 2 Single Ended  
Working Pressure 140 Tested by hydraulic pressure to 280 Date of test 14.4.11 No. of Certificate 10933  
Can each boiler be worked separately Yes Area of fire grate in each boiler 37.5 No. and Description of Safety Valves to  
each boiler 2 Direct Spring Area of each valve 4.9 Pressure to which they are adjusted 145 Are they fitted with easing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 8 ft. Mean dia. of boilers 11-0 1/2 Length 10-6 Material of shell plates 6  
Thickness 13/16 Range of tensile strength 28/32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams DR  
long. seams TRIDBS Diameter of rivet holes in long. seams 7/8 Pitch of rivets 6 1/2 Lap of plates or width of butt straps 13 1/8  
Per centages of strength of longitudinal joint rivets 84-6/4 plate 86-6/6 Working pressure of shell by rules 145 Size of manhole in shell 12 x 16  
Size of compensating ring 6 1/2 x 1 No. and Description of Furnaces in each boiler 2 Corrugated Material S Outside diameter 38 1/8  
Length of plain part top Thickness of plates crown 37 1/6 Description of longitudinal joint weld No. of strengthening rings  
bottom Working pressure of furnace by the rules 143 Combustion chamber plates: Material S Thickness: Sides 19/32 Back 9/16 Top 19/32 Bottom 1/8  
Pitch of stays to ditto: Sides 8 1/2 x 9 1/4 Back 9 1/2 x 8 Top 9 x 8 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 142  
Material of stays S Diameter at smallest part 1 1/8 Area supported by each stay 8 1/2 Working pressure by rules 142 End plates in steam space:  
Material S Thickness 3/4 Pitch of stays 15 x 15 How are stays secured DN. Washers Working pressure by rules 141 Material of stays S  
Diameter at smallest part 3 1/4 Area supported by each stay 22 1/2 Working pressure by rules 170 Material of Front plates at bottom S  
Thickness 3/4 Material of Lower back plate S Thickness 23/32 Greatest pitch of stays 13 1/2 x 8 Working pressure of plate by rules 145  
Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates S Thickness: Front 3/4 Back 3/4 Mean pitch of stays 8 7/8  
Pitch across wide water spaces 13 1/4 Working pressures by rules 219 Girders to Chamber tops: Material S Depth and  
thickness of girder at centre 6 3/8 x 5 1/8 (2) Length as per rule 26 1/6 Distance apart 8 Number and pitch of stays in each 2 at 9"  
Working pressure by rules 144 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked  
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet  
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. \_\_\_\_\_ Description \_\_\_\_\_  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
 Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_  
 Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_  
 If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_  
 Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_  
 Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Plates \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_  
 Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description of joint \_\_\_\_\_  
 Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_  
 Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

## SPARE GEAR. State the articles supplied:—

2 Connecting Rod. 1st Ind. 1st 1/2, 2nd Ind. 2 801 and Bearing bolts.  
 1 Set of coupling bolts 1 Set of 2nd. Bldg. Pump. valves 1 Set of Piston Rings  
 A Quantity of small bolts & nuts & Iron of various sizes.  
 The foregoing is a correct description,  
 Manufacturer. *W. J. McAlister* Managing Director

Dates of Survey while building { During progress of work in shops - - 1910. Dec. 5. 9. 13. 20. 29. 1911. Jan. 12. 18. 30 Feb. 7. 21. 28. Mar. 13. 23. 27. 29. Apr. 14. 18. May 5. 11. 12. 18. 23. 24 June 1. 26.  
 { During erection on board vessel - -  
 Total No. of visits 26.

Is the approved plan of main boiler forwarded herewith *Yes*  
 " " " donkey " " " *None*

Dates of Examination of principal parts—Cylinders 7-2-11 Slides 12-1-11 Covers 12-1-11 Pistons 29-12-10 Rods 29-12-10  
 Connecting rods 20-12-10 Crank shaft 18-1-11 Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓  
 Stern tube ✓ Steam pipes tested 23-5-11 Engine and boiler seatings 14-4-11 Engines holding down bolts 2-6-11  
 Completion of pumping arrangements 2-6-11 Boilers fixed 5-5-11 Engines tried under steam 6-6-11  
 Main boiler safety valves adjusted 2-6-11 Thickness of adjusting washers PV 3/8 SV 13/32 PV 13/32 SV 3/8  
 Material of Crank shaft S Identification Mark on Do. *W. J. M.* 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 *Copper (SD)* ✓ Test pressure 280 lb ✓

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines & Boilers have been built under Special Survey in accordance with the approved plan & the workmanship & material are of good quality & is eligible in my opinion for the record of NB-140.*  
*6-11*  
*These Engines are for working the Dredging Plant only.*

It is submitted that this vessel is eligible for THE RECORD + NB 6.11.

140th.

The amount of Entry Fee £ : : When applied for, 12/6/1911  
 Special .. £ 16. : 16 :  
 Donkey Boiler Fee .. £ : : When received, 13/6/1911  
 Travelling Expenses (if any) £ : :  
 Committee's Minute *Glasgow 10 JUN. 1911*

*W. J. McAlister*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Assigned + NB 6.11 - 140 lbs.



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Lloyd's Register Foundation

Glasgow.

Certificate (if required) to be sent to

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

12/6/11.