

# REPORT ON MACHINERY.

No. 34609

Date of writing Report 31. 10. 1914 When handed in at Local Office 19 Port of **GLASGOW** Received at London Office WED. NOV. 25. 1914

No. in Survey held at **Parsley** Date, First Survey 26/5/14 Last Survey 20/11/1914  
 Reg. Book. on the **Screw Steam Hopper Barge No 428** (Number of Visits 25) Gross Tons 623  
 Master Built at **Parsley** By whom built **Fleming Ferguson & Co 428** Net Tons 243  
 Engines made at **Parsley** By whom made **Fleming Ferguson & Co (428)** When built 1914  
 Boilers made at **ditto** By whom made **ditto** when made 1914  
 Registered Horse Power Owners **Dee Dee Harbour Trust** Port belonging to **Dee Dee**  
 Nom. Horse Power as per Section 28 106 Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **No**

**ENGINES, &c.**—Description of Engines **Triple Expansion** No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 15"-24"-40" Length of Stroke 27 Revs. per minute 105 Dia. of Screw shaft as per rule 8.1 Material of screw shaft S  
 as fitted 8.14 Is the screw shaft fitted with a continuous liner the whole length of the stern tube **Yes** Is the after end of the liner made water tight in the propeller boss **Yes** If the liner is in more than one length are the joints burned **Yes** 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 **Yes** If two liners are fitted, is the shaft lapped or protected between the liners **Yes** Length of stern bush 34  
 Dia. of Tunnel shaft as per rule 7.39 Dia. of Crank shaft journals as per rule 7.76 Dia. of Crank pin 8.3/8 Size of Crank webs 5 1/2 x 16 Dia. of thrust shaft under collars 8" Dia. of screw 9-6" Pitch of Screw 11-0" No. of Blades 4 State whether moveable **No** Total surface 404  
 No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 15" Can one be overhauled while the other is at work **Yes**  
 No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 15" Can one be overhauled while the other is at work **Yes**  
 No. of Donkey Engines 2 Sizes of Pumps 6 1/4 x 2 1/2 6 x 4 x 6 Dupl No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room **One 2"** In Holds, &c. **Three 2" in stokehole**  
 No. of Bilge Injections 1 sizes 4" Connected to condenser or to circulating pump **Yes** Is a separate Donkey Suction fitted in Engine room & size **Yes 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 **None**  
 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 **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 16-10-14 of Stern Tube 16-10-14 Screw shaft and Propeller 16-10-14  
 Is the Screw Shaft Tunnel watertight **None** Is it fitted with a watertight door **—** worked from **—**

**BOILERS, &c.**—(Letter for record **R**) Manufacturers of Steel **Edna Iron Steel Co. Ltd & Do Steel Co. Ltd**  
 Total Heating Surface of Boilers 1860.5 Is Forced Draft fitted **No** No. and Description of Boilers **One Single Ended**  
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 23-10-14 No. of Certificate 12909  
 Can each boiler be worked separately **Yes** Area of fire grate in each boiler 56 # No. and Description of Safety Valves to each boiler **2 Dried Springs** Area of each valve 5-938 Pressure to which they are adjusted 185 Are they fitted with easing gear **Yes**  
 Smallest distance between boilers or uptakes and bunkers or woodwork 21" Mean dia. of boilers 14-1 1/2 Length 10-6 Material of shell plates **S**  
 Thickness 1 1/32 Range of tensile strength 28/32 Are the shell plates welded or flanged **No** Descrip. of riveting: cir. seams **DR**  
 long. seams **TR & DBS** Diameter of rivet holes in long. seams 13/16 Pitch of rivets 8 1/8 ~~Top of plates~~ width of butt straps 1 1/2"  
 Per centages of strength of longitudinal joint rivets 87.7 plate 85.5 Working pressure of shell by rules 185 Size of manhole in shell 16 x 12"  
 Size of compensating ring 7 1/8 x 1 5/32 No. and Description of Furnaces in each boiler **3 Corrugated** Material **S** Outside diameter 3-6 3/4"  
 Length of plain part top **—** bottom **—** Thickness of plates crown 17/32 Description of longitudinal joint **weld** No. of strengthening rings **—**  
 Working pressure of furnace by the rules 191 Combustion chamber plates: Material **S** Thickness: Sides 2 1/32 Back 5/8 Top 2 1/32 Bottom 2 5/32  
 Pitch of stays to ditto: Sides 8 1/4 x 9 3/4 Back 8 1/4 x 8 1/2 Top 8 x 10 If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules 182  
 Material of stays **Iron** Area at smallest part 203.236 Area supported by each stay 80.0 Working pressure by rules 189 End plates in steam space: Material **S** Thickness 1 1/8 Pitch of stays 17 x 18 How are stays secured **DN** Working pressure by rules 185 Material of stays **S**  
 Diameter at smallest part 5-56 Area supported by each stay 306 Working pressure by rules 189 Material of Front plates at bottom **S**  
 Thickness 2 5/32 Material of Lower back plate **S** Thickness 5/8 DP Greatest pitch of stays 8 1/4 x 15 1/4 Working pressure of plate by rules 189  
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/4 Material of tube plates **S** Thickness: Front 2 5/32 Back 2 5/32 Mean pitch of stays 10 5/8  
 Pitch across wide water spaces 15 1/8 Working pressures by rules 189 Girders to Chamber tops: Material **S** Depth and thickness of girder at centre 8 1/4 x 3 1/4 (2) Length as per rule 2-8 5/8 Distance apart 8" Number and pitch of stays in each **2 at 10"**  
 Working pressure by rules 184 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 **—**



