

REPORT ON MACHINERY.

No. 529

Port of Barrow in Furness

MON. 17 JUL 1893

Received at London Office

No. in Survey held at Barrow

Date, first Survey 21st July 1892 Last Survey 12th July 1893

Reg. Book.

(Number of Visits 142)

on the Twin Screw Dredger Brancher

Tons } Gross 2511.08
Net 1630.22

Master J. G. Galt Built at Barrow By whom built Naval Construction & Armaments Co. Ltd. When built 1893

Engines made at Barrow By whom made Naval Construction & Armaments Co. Ltd. when made 1893

Boilers made at Do By whom made " " " when made 1893

Registered Horse Power 225 Owners Jersey Dock & Harbour Board Port belonging to Liverpool

Nom. Horse Power as per Section 28 262

ENGINES, &c. — Description of Engines Triple Expansion Twin Screw (3 cranks) No. of Cylinders Size
Diameter of Cylinders 18" 29" 47" Length of Stroke 30" Revolutions per minute 90 Diameter of Screw shaft as per rule 8.6
Diameter of Tunnel shaft as per rule 8.2" as fitted 8.7" Diameter of Crank shaft journals 8 3/4" Diameter of Crank pin 9 1/4" Size of Crank webs 18 x 6"
Diameter of screw 12' 0" Pitch of screw 14-6" No. of blades 4 State whether moveable No Total surface 41.44
No. of Feed pumps 2 Weirs Diameter of ditto 7" Stroke 15" Can one be overhauled while the other is at work Yes
No. of Bilge pumps two Diameter of ditto 4 1/2" Stroke 12" Can one be overhauled while the other is at work Yes
No. of Donkey Engines one Sizes of Pumps 15" x 15" 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps.
In Engine Room Two 3 1/2" four 3" In Holds, &c. No 1 comp. one 3", No 2 one 3", Pump
Room Three 3", No 7 one 3 1/2" Two 3" No 10 one 3 1/2", Tunnel wells Two 3 1/2"
No. of bilge injections 1 sizes 7 1/2" Connected to condenser, or to circulating pump By Pump Is a separate donkey suction fitted in Engine room & size Yes 3"
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 Yes
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
When were stern tube, propeller, screw shaft, and all connections examined in dry dock before Caunich Is the screw shaft tunnel watertight Yes
Is it fitted with a watertight door Yes worked from upper platform

OILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 4232.14 certified 189 lbs
No. and Description of Boilers Two Multitubular Working Pressure 160 Tested by hydraulic pressure to 360
Date of test 16.3.93 Can each boiler be worked separately Yes Area of fire grate in each boiler 67.14 No. and Description of safety valves to
each boiler Two Spring loaded Area of each valve 7.6" Pressure to which they are adjusted 160 lbs Are they fitted
with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 14.9"
Length 10.6" Material of shell plates Steel Thickness 1 3/32" Description of riveting: circum. seams Cap but + double red long. seams DBS double pitch
Diameter of rivet holes in long. seams 7/16" Pitch of rivets 9 1/4" & 4 3/4" Lap of plates or width of butt straps 20 7/8" 3 rows
Per centages of strength of longitudinal joint 89.6 Working pressure of shell by rules 195.6 Size of manhole in shell 16 x 12"
Size of compensating ring 42 x 31 x 1 3/32" No. and Description of Furnaces in each boiler 37 rows corrugated Material Steel Outside diameter 3.10 3/4"
Length of plain part top 6" bottom 6" Thickness of plates top 19/32" bottom 19/32" Description of longitudinal joint Welded No. of strengthening rings ✓
Working pressure of furnace by the rules 201 Combustion chamber plates: Material Steel Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 3/4"
Pitch of stays to ditto: Sides 8 x 8" Back 8 x 8" Top 8 x 6 3/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 190
Material of stays Steel Diameter at smallest part 1 3/8" full 5 1/4" Area supported by each stay 6 1/4" Working pressure by rules 184.4 End plates in steam space:
Material Steel Thickness 1 1/8" Pitch of stays 15 x 15" How are stays secured Nuts Working pressure by rules 252 Material of stays Steel
Diameter at smallest part 3.916 Area supported by each stay 183.75 Working pressure by rules 193.6 Material of Front plates at bottom Steel
Thickness 3/4" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 11 Working pressure of plate by rules 206
Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" 4 5/8" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 9 1/2 x 9 1/4"
Pitch across wide water spaces 13 1/2" Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 7 1/2 x 9 1/16 x 2 Length as per rule 26 3/4" Distance apart 6 3/4" Number and pitch of Stays in each Two 8"
Working pressure by rules 185 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 ✓
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 ✓



BRW42-0095

DONKEY BOILER— Description

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with casing gear _____ If steam from main boilers can enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage of strength of joint _____ Rivets _____ 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 _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

 Manufacturer.

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

Certificate (if required) to be sent to

The amount of Entry Fee.	£	:	:	When applied for,
Special	£	:	:18.....
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:18.....

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUES. 18 JUL 1893

Assigned



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 Foundation