

REPORT ON MACHINERY.

Port of Swan

Received at London Office TUES. 17 SEP. 1895

No. in Survey held at Swan
Reg. Book.

Date, first Survey May 7 Last Survey Sept 16 1895
(Number of Visits 19)

Supply on the Iron Steam Trawler 'Undaunted'

Tons { Gross 141
Net 53

Master Built at Berkeley By whom built Cochrane & Cooper When built 1895

Engines made at Swan By whom made Earle & Son when made 1895

Boilers made at Swan By whom made Earle & Son when made 1895

Registered Horse Power 44 Owners Grimby Union I. & Co Port belonging to Grimby

Nom. Horse Power as per Section 28 47 HP

ENGINES, &c.— Description of Engines Triple Comp. Inv. & Acting No. of Cylinders Three

Diameter of Cylinders 11. 17. 20 Length of Stroke 21 Revolutions per minute 130 Diameter of Screw shaft as per rule 5.307
as fitted 5.30

Diameter of Tunnel shaft as per rule 5.21 Diameter of Crank shaft journals 5 1/2 Diameter of Crank pin 5 1/2 Size of Crank webs 6 1/2 x 3 1/2
as fitted 5 1/2

Diameter of screw 7.8 Pitch of screw 9.3 No. of blades 4 State whether moveable In Total surface 2129 ft

No. of Feed pumps one Diameter of ditto 2 Stroke 10 Can one be overhauled while the other is at work -

No. of Bilge pumps one Diameter of ditto 3 Stroke 10 Can one be overhauled while the other is at work -

No. of Donkey Engines one Sizes of Pumps 3-6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one 2 In Holds, &c. one 2

3. Ejector with suction in the Engine Bilge & hold and discharge on deck

No. of bilge injections one size 3 3/4 Connected to condenser, or to circulating pump pumps a separate donkey suction fitted in Engine room & size 4-40 c/in

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 suction to forward How are they protected wood cased

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 now and Is the screw shaft tunnel watertight -

Is it fitted with a watertight door - worked from -

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 800 29 ft

No. and Description of Boilers One Cylindrical Built Working Pressure 160 lb Tested by hydraulic pressure to 320 lb

Date of test 24/6/95 Can each boiler be worked separately - Area of fire grate in each boiler 254 ft No. and Description of safety valves to

each boiler Two Spring loaded Area of each valve 3.14 Pressure to which they are adjusted 165 lb Are they fitted

with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 8 Mean diameter of boilers 10.0

Length 9.6 Material of shell plates Steel Thickness 27/32 Description of riveting: circum. seams all lap long. seams all chop 3/4

Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 6 7/8 Lap of plates or width of butt straps 12 1/4

Per centages of strength of longitudinal joint rivets 85 1/2 Working pressure of shell by rules 160 lb Size of manhole in shell 16-12
plate 82.7

Size of compensating ring 30 x 20 x 27/32 No. and Description of Furnaces in each boiler Two Plain Material Steel Outside diameter 35 3/8

Length of plain part top 8.5 Thickness of plates bottom 4 1/16 Description of longitudinal joint inward No. of strengthening rings -
bottom 6.5

Working pressure of furnace by the rules 161 lb Combustion chamber plates: Material Steel Thickness: Sides 9 1/16 Back 9 1/16 Top 9 1/16 Bottom 10 1/16

Pitch of stays to ditto: Sides 8 1/4 Back 8 Top 8 If stays are fitted with nuts or riveted heads both Working pressure by rules 161 lb

Material of stays Steel Diameter at smallest part 1 3/8 Area supported by each stay 8 1/2 x 8 Working pressure by rules 179 lb End plates in steam space:

Material Steel Thickness 29/32 Pitch of stays 15 How are stays secured all nut Working pressure by rules 166 lb Material of stays Steel

Diameter at smallest part 2 1/2 Area supported by each stay 15 x 14 1/2 Working pressure by rules 165 lb Material of Front plates at bottom Steel

Thickness 27/32 Material of Lower back plate Steel Thickness 10 1/16 Greatest pitch of stays 8 Working pressure of plate by rules 180 lb

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 27/32 Back 27/32 Mean pitch of stays 9

Pitch across wide water spaces 13 1/2 Working pressures by rules 166 lb Girders to Chamber tops: Material Iron Depth and

thickness of girder at centre 6 x 15 1/4 all Length as per rule 25 Distance apart 7 1/2 Number and pitch of Stays in each two 8

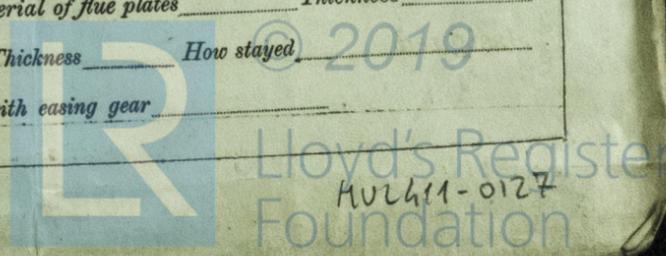
Working pressure by rules 191 lb Superheater or Steam chest; how connected to boiler - Can the superheater be shut off and the boiler worked

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 -



DONKEY BOILER— Description *In Donkey Boiler*
 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 easing gear _____ If steam from main boiler _____
 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 _____ Descripti _____
 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:—*Two top end bolts. In bottom end bolts. In main bearing bolts. One set Coupling bolts. One set Dead and Bidge pump valves. One set check valves. Safety valve spring Iron bolts and nuts. The vessel efficient with masts and sails as a steamer.*
 The foregoing is a correct description,
W. Scaton Manufacturer.

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

The Machinery and Boiler of this Steam Drifter has been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted in the Notification + L.M.C. 9-95 in the Register Book.

W. Scaton

It is submitted that this vessel is eligible for THE RECORD
 ✠ L.M.C. 9.95.

Wm. S.
 17.9.95

Certificate (if required) to be sent to *Hull*
 The amount of Entry Fee. . . £ 1 : 0 :
 Special £ 0 : 0 :
 Donkey Boiler Fee £ 2 : 0 :
 Travelling Expenses (if any) £ ✓ : :
 When applied for, 14/9/1895
 When received, 26.9.18.95

James Jones
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 TUES. 24 SEP 1895

Committee's Minute
 Assigned *+ L.M.C. 9.95*

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

Form No. 19.
 Signal Letters
 Official Number. 105528
 No., Date, and Port of pr
 Whether British or Foreign Built. *British*
 Number of Decks
 Number of Masts
 Rigged
 Stern
 Build
 Galleries
 Head
 Framework and description
 Number of Bulkheads
 Number of water ballast their capacity in tons
 Total to quarter the depth f side amidships to botto
 of lines
 Description
 Three bran Expansion
 Number
 Iron or Steel
 Pressure when load
 GROSS
 Under Tonnage Deck
 Closed-in spaces above
 Space or spaces bet
 Poop
 Forecastle
 Round House
 Other closed-in spa
 Break
 Spaces for
 Gross To
 Reductions, as per C
 Register
 Name of Mas
 Names, Residence, a
 Number of Sixty-f
 The
 ated 20
 9 | 88 [2] 963 J. & C
 508 2000 10 | 89 34,584

