

REPORT ON MACHINERY.

Port of Mull

Received at London Office

No. in Survey held at Berkeley & Hull

Date, first Survey May 19th Last Survey 25th August 1894

g. Book. Sup on the Iron Steam Trawler Northwold

(Number of Visits 17)

Tons ^{Gross} 127
_{Net} 45

Master Amos Croft Built at Berkeley By whom built Cochrane & Cooper

When built 1894

Engines made at Mull By whom made Amos & Smith when made 1894

Boilers made at Mull By whom made Amos & Smith when made 1894

Registered Horse Power 35 Owners The Northwold Iron Fishing Co^l Port belonging to Grimsby

Net Horse Power as per Section 28

ENGINES, &c.— Description of Engines Triple Comp. Inv & Acting No. of Cylinders Three
 Diameter of Cylinders 10. 16. 25 1/2 Length of Stroke 20 Revolutions per minute 120 Diameter of Screw shaft 5.01
 Diameter of Tunnel shaft 4.75 Diameter of Crank shaft journals 5 1/2 Diameter of Crank pin 5 1/2 Size of Crank webs 6 1/4 x 3 1/4
 Diameter of screw 7.6 Pitch of screw 8.6 No. of blades 4 State whether moveable No Total surface 18.3 sq ft
 of Feed pumps One Diameter of ditto 2 1/8 Stroke 11 Can one be overhauled while the other is at work ✓
 of Bilge pumps One Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work ✓
 of Donkey Engines One Sizes of Pumps 2 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room One 2 In Holds, &c. One 2
 Suction with suction in the Hold & Engine Bilge and discharge on deck
 of bilge injections one size 3 Connected to condenser, or to circulating pump ✓ Is a separate donkey suction fitted in Engine room & size Pro. Specta
 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
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both
 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
 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
 all pipes are carried through the bunkers suction to forward How are they protected wood cased
 all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes
 stern were stern tube, propeller, screw shaft, and all connections examined in dry dock Yes Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 706 sq ft
 and Description of Boilers One cylindrical Mull Working Pressure 170 lb Tested by hydraulic pressure to 340 lb
 Date of test 31/7/94 Can each boiler be worked separately ✓ Area of fire grate in each boiler 25 sq ft No. and Description of safety valves to
 boiler Inv Spring loaded Area of each valve 4.9 sq Pressure to which they are adjusted 170 lbs Are they fitted
 easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 7 Mean diameter of boilers 9.9
 Length 9.0 Material of shell plates Steel Thickness 14/16 Description of riveting: circum. seams all lap long. seams all chap stl
 Diameter of rivet holes in long. seams 1/32 Pitch of rivets 6.45 Lap of plates or width of butt straps 14 1/4
 Percentages of strength of longitudinal joint 114% Working pressure of shell by rules 172 lb Size of manhole in shell 16 x 12
 Diameter of compensating ring 30 x 26 x 14/16 No. and Description of Furnaces in each boiler two plain Material Steel Outside diameter 35
 Length of plain part 5.6 Thickness of plates 11/16 Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 173 lb Combustion chamber plates: Material Steel Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 10/16
 Diameter of stays to ditto: Sides 8 Back 8 Top 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 171 lb
 Material of stays Steel Diameter at smallest part 1 3/8 Area supported by each stay 8 x 8 Working pressure by rules 185 lb End plates in steam space:
 Material Steel Thickness 14/16 Pitch of stays 14 1/2 How are stays secured all nuts Working pressure by rules 170 lb Material of stays Steel
 Diameter at smallest part 2 1/2 Area supported by each stay 14 1/2 x 12 1/2 Working pressure by rules 204 lb Material of Front plates at bottom Steel
 Thickness 14/16 Material of Lower back plate Steel Thickness 12/16 Greatest pitch of stays 8 Working pressure of plate by rules 170 lb
 Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 Material of tube plates Steel Thickness: Front 14/16 Back 5 1/4 Mean pitch of stays 14 1/4 x 9 1/2
 Diameter across wide water spaces 14 Working pressures by rules 170 lb Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 6 1/2 x 1 1/2 Length as per rule 25 7/8 Distance apart 7 1/4 Number and pitch of Stays in each two 8
 Working pressure by rules 170 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
 Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 Strengthened 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 *No 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 boilers 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: *Two top end bolts. Two bottom end bolts. Two main bearing bolts. One set Coupling Bolts. One set Dead Pump Valve. One set Belg. Pump Valve. One set Check Valve. Safety Valve Spring*

The vessel efficient with masts and sails as a Steamer

The foregoing is a correct description,
J. H. ROSE & SONS, Manufacturer.

J. H. ROSE MANAGER

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

*The Machinery and Boiler of this Steam Steamer have 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 for the notification **FLMC 8-94** in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + LMC 8, 94

*J. H. ROSE
30-8-94*

George Huxford & Sons

MACHINERY CERTIFICATE
 Certificate (if required) to be sent to *Hull*

The amount of Entry Fee..	£ 1 : 0 :	When applied for,
Special	£ 0 : 0 :	18
Donkey Boiler Fee	£ ✓ :	When received,
Travelling Expenses (if any) £	✓ :	28/8/18 94

George Huxford & Sons
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute **FRIDAY 31 AUG 1894**
 Assigned *+ LMC 8, 94*

