

REPORT ON MACHINERY.

No. 12348

FRI 21 JUL 1893

Port of Glasgow

No. in Survey held at Glasgow

Date, first Survey 12th April

Last Survey 13th July 1893

Reg. Book. on the Steam Trawler Teal

(Number of Visits 21)

Master Built at Govan By whom built MacKie & Thomson When built 1893

Engines made at Glasgow By whom made Muir & Houston when made 1893

Boilers made at Glasgow By whom made Muir & Houston when made 1893

Registered Horse Power 35 Owners Great Grimsby Ice Co Port belonging to Grimsby

Nom. Horse Power as per Section 28 33

ENGINES, &c.— Description of Engines Triple Expansion inverted direct acting No. of Cylinders three

Diameter of Cylinders 10, 16, 25 1/2 Length of Stroke 20 Revolutions per minute _____ Diameter of Screw shaft _____ as per rule 4 1/4

Diameter of Tunnel shaft _____ as fitted None Diameter of Crank shaft journals 5 1/4 Diameter of Crank pin 5 1/4 Size of Crank webs 3 3/8 x 9 3/4

Diameter of screw 1' 0" Pitch of screw 9' 0" No. of blades four State whether moveable fixed Total surface 16 sq ft

No. of Feed pumps one Diameter of ditto 1 3/4 Stroke 10 Can one be overhauled while the other is at work —

No. of Bilge pumps one Diameter of ditto 2 1/4 Stroke 10 Can one be overhauled while the other is at work —

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

In Engine Room Two 2" in engine room In Holds, &c. 2" Centre main hold.

No. of bilge injections one sizes 2 1/2" Connected to condenser, or to circulating pump air b. Is a separate donkey suction fitted in Engine room & size yes 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching Is the screw shaft tunnel watertight none

Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 540

No. and Description of Boilers one Cylindrical return tubular Working Pressure 160 Tested by hydraulic pressure to 320

Date of test _____ Can each boiler be worked separately — Area of fire grate in each boiler 27 No. and Description of safety valves to each boiler two spring loaded Area of each valve 3 1/4 Pressure to which they are adjusted 160 Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean diameter of boilers 108

Length 8' 9" Material of shell plates Stal Thickness 25/32 Description of riveting: circum. seams lap 1. rivet long. seams D. Butt 4 Rivets

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 1 1/2" Lap of plates or width of butt straps 17"

Per centages of strength of longitudinal joint _____ rivets 101 Working pressure of shell by rules 165 Size of manhole in shell 12 x 16 plate 85

Size of compensating ring McNeil's No. and Description of Furnaces in each boiler two Material Stal Outside diameter 33

Length of plain part _____ top 5 1/4 Thickness of plates _____ crown 5/8 Description of longitudinal joint Welded No. of strengthening rings none bottom 7 3/4 bottom 7/8 x 3/4

Working pressure of furnace by the rules 200 Combustion chamber plates: Material Stal Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 3/4

Pitch of stays to ditto: Sides 8 1/4 Back 8 1/4 Top 8 1/4 x 6 1/2 stays are fitted with nuts or riveted heads nuts Working pressure by rules 161

Material of stays Stal Diameter at smallest part 1 1/2 Area supported by each stay 8 1/4 x 8 1/4 Working pressure by rules 170 End plates in steam space: _____

Material Stal Thickness 49/64 Pitch of stays 13 How are stays secured D. nuts & washers Working pressure by rules 165 Material of stays Stal

Diameter at smallest part 3 1/4 Area supported by each stay 13 x 13 Working pressure by rules 185 Material of Front plates at bottom Stal

Thickness 49/64 Material of Lower back plate Stal Thickness 49/64 Greatest pitch of stays 11 1/2 Working pressure of plate by rules 188

Diameter of tubes 3" Pitch of tubes 4 3/8 x 4 1/4 Material of tube plates Stal Thickness: Front 49/64 + 9/16 double Back 1/16 Mean pitch of stays 8 5/8

Pitch across wide water spaces 13 Working pressures by rules 226 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 6 x 2 x 3/4 Length 26 Distance apart 6 1/2 Number and pitch of Stays in each two 8 1/4

Working pressure by rules 177 Superheater or Steam chest; how connected to boiler none 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 _____

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 _____

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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:— *As required by the rules*

The foregoing is a correct description,
Wm Houston Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boiler have been built under the conditions of Special Survey. They have been severely fitted on board and were found to work satisfactorily under steam, except that the feed pump valve chest showed a slight leak.

Previous to the trial the feed pump air vessel burst and the connecting rod bolts of the feed donkey broke. Both parts have been renewed. This accident was apparently due to negligence. The material and workmanship is good.

It is submitted that this vessel will be eligible for the record & L.M.C. 7.93. When the feed pump valve chest has been renewed or efficiently repaired.

The Grimsby Hull Surveyors have been advised of this matter and also that this vessel has proceeded to Grimsby.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 7.93
The feed valve chest appears to have been repaired & the owners propose to fit a new one on the next return
July 27/7/93 -

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

(The Surveys are requested to be made before the space for Committee's Minute.)

Certificate (if required) to be sent to _____

The amount of Entry Fee..	£ 1 : "	When applied for, 14/4/93
Special	£ 8 : "	When received, 20/4/93
Donkey Boiler Fee	£ " : "	
Travelling Expenses (if any) £	" : "	

Committee's Minute TUES. 25 JUL 1893 FRI 28 JUL 1893

Assigned Note
Dr. A. Hull 25/7/93

+ L.M.C. 7.93

