

gls. No. 164574

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office SAT. 8 OCT 1898

Survey held at Paisley

Date, first Survey 17th June 1897 Last Survey 26th August 1898

Book. on the S.S. "VELOX"

(Number of Visits 34)

Built at Greenock By whom built Carmichael & McKean When built 1898

Engines made at Paisley By whom made Bow MacKachlan & Co when made 1898

Boilers made at Paisley By whom made Bow MacKachlan & Co when made 1898

Indicated Horse Power _____ Owners _____ Port belonging to _____

Horse Power as per Section 28 76 Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple Exp. Surface Cond. No. of Cylinders 3 No. of Cranks 3
Diameter of Cylinders 13, 22, & 35 Length of Stroke 27 Revolutions per minute 110 Diameter of Screw shaft as per rule 7.16
Diameter of Tunnel shaft as fitted 6.48 Diameter of Crank shaft journals 7/4" Diameter of Crank pin 7/4" Size of Crank webs 5/4 x 13/2
Diameter of screw 9.3" Pitch of screw 13.0" No. of blades 4 State whether moveable no Total surface 32 sq. ft.

No. of Feed pumps 1 Diameter of ditto 3 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 3 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work

No. of Donkey Engines one Sizes of Pumps 3 1/2" double acting No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room 2-2 dia of bilge ejector In Holds, &c. one 2"

No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump pumps 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

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves & cocks

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

Are the pipes 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

Were stern tube, propeller, screw shaft, and all connections examined in dry dock before launch Is the screw shaft tunnel watertight

Is the tunnel fitted with a watertight door worked from

BOILERS, &c.— (Letter for record 13) Total Heating Surface of Boilers 1276 Is forced draft fitted no

No. and Description of Boilers one multitubular single end. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 1/12/97 Can each boiler be worked separately Area of fire grate in each boiler 50 1/2 No. and Description of safety valves to boiler 2 Saknt Spring 2 5/8" dia Area of each valve 5.41 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 14" Mean diameter of boilers 12.95/8"

Material of shell plates steel Thickness 1 3/16" Description of riveting: circum. seams double lap long. seams treble butt

Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8" Lap of plates or width of butt straps 17 3/4"

Percentages of strength of longitudinal joint rivets 86.7 plate 85.1 Working pressure of shell by rules 197 lbs Size of manhole in shell 12" x 16"

No. of compensating rings McNeil's No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 3.4"

Thickness of plain part top bottom Thickness of plates crown 5/8" bottom 5/8" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 189 lbs Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 7/8"

Working pressure of stays to ditto: Sides 7/4 x 7/4 Back 7/4 x 7/4 Top 7/4 x 7/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lbs

Material of stays steel Diameter at smallest part 1.38 Area supported by each stay 60 Working pressure by rules 199 lbs End plates in steam space: Material steel Thickness 29/32 Pitch of stays 14 x 14 How are stays secured nuts Working pressure by rules 187 lbs Material of stays steel

Diameter at smallest part 2.34 Area supported by each stay 196 Working pressure by rules 197 lbs Material of Front plates at bottom steel

Thickness 3/4 Material of Lower back plate steel Thickness 1/16" Greatest pitch of stays 12" Working pressure of plate by rules 296 lbs

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

Distance across wide water spaces 13 1/2" Working pressures by rules 209 lbs Girders to Chamber tops: Material iron Depth and thickness of girder at centre 7/2 x 2" Length as per rule 2.8 Distance apart 7" Number and pitch of Stays in each 3 - 4 3/4"

Working pressure by rules 188 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked independently

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

Reinforced 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 *none*

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 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:— *2 Piston rod bolts, 2 Connecting rod bolts, 2 main bearing bolts, 2 safety valve springs; a quantity assorted bolts nuts, 1 coupling bolts, 1 set Feed & Bilge pump valves.*

The foregoing is a correct description,
Manufacturer.

Wm. W. Laehless

Dates of Survey while building
During progress of work in shops— 1897. June 17, 28. July 28. Aug 3, 26. Sept 7. Oct 14, 26, 27. Nov 22, 30. Dec 1, 8, 10, 30.
During erection on board vessel— 1898. Jan 12, 25. Feb 3, 21. Mar 7, 21. Apr 7, 13. May 5, 11, 23, 30. June 22, 24. July 7. Aug 3, 5, 26.
Total No. of visits *34*

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

ENGINES—Length of stern bush *2-1/4"* Diameter of crank shaft journals *as per rule 6.8"* Diameter of thrust shaft under collars *6 5/16"*

BOILERS—Range of tensile strength *27 to 32* Are they welded or flanged *no* DONKEY BOILERS—No. Range of tensile strength

Is the approved plan of main boiler forwarded herewith Is the approved plan of donkey boiler forwarded herewith

The machinery of this vessel has been constructed under special survey, and is of good material & workmanship, it has been securely fitted on board, & is in my opinion eligible to be classed in the Register Book to have the record of Survey

L.M.C. 9.98.

It is submitted that this vessel is eligible for THE RECORD
L.M.C. 8.98
W. W. Laehless
2/10/98

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee. £ : - : When applied for.
Special £ 11 : 8 : 29.9.1898
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : : 17.10.98

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

Committee's Minute
Assigned
FRI. 14 OCT 1898
MACHINERY CERTIFICATE WRITTEN.

