

REPORT ON MACHINERY.

No. 22602

Ind. No. 4425
FEB. 22 1906

Port of Sunderland

Received at London Office

No. in Survey held at Sunderland

Date, first Survey 15th August 05 Last Survey 17th January 1906

Reg. Book.

18 Supp. on the Steel Screw Steamer "VIRGINIA"

(Number of Visits 24)
(Malt) 9

Tons } Gross 3459.09
 } Net 2352.18
When built 1906

Master L. Bussanich Built at Stokton

By whom built Craig Taylor & Co

Engines made at Sunderland

By whom made N. E. Marine Engineering Co., Ltd. when made 1906

Boilers made at Sunderland

By whom made N. E. Marine Engineering Co., Ltd. when made 1906

Registered Horse Power 356

Owners Unione Austriacadi Navigazione gla Austro Americana & Fratelli Comulich Societa Anonima Port belonging to Trieste

Nom. Horse Power as per Section 28 356

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion, Inverted No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 24-40-65 Length of Stroke 45 Revs. per minute 44 Dia. of Screw shaft as per rule 13.43 Material of Iron
as fitted 13.2 screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight

in the propeller boss yes If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two

liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4-8

Dia. of Tunnel shaft as per rule 12.11 Dia. of Crank shaft journals as per rule 12.11 Dia. of Crank pin 12.2 Size of Crank webs 8x19.2 Dia. of thrust shaft under

collars 12.2 Dia. of screw 16-3 Pitch of screw 16-0 No. of blades four State whether moveable no Total surface 80 sq

No. of Feed pumps Two Diameter of ditto 5.2 Stroke 21 Can one be overhauled while the other is at work yes

No. of Bilge pumps Two Diameter of ditto 4 Stroke 21 Can one be overhauled while the other is at work yes

No. of Donkey Engines Two duplex Sizes of Pumps 8x10x10 - 4 1/2 x 4 1/2 x 4 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3 1/2 In Holds, &c. Two of 3 1/2 in each hold in wing

and one of 3 1/2 in after hold well One of 3 1/2 in tunnel well

No. of bilge injections one sizes 5 Connected to condenser, or to circulating pump — Is a separate donkey suction fitted in Engine room & size one 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 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 new vessel Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 4918 sq Is forced draft fitted yes

No. and Description of Boilers Two single ended, Cyl. & Mult. Working Pressure 180 lb Tested by hydraulic pressure to 360 lb

Date of test 19/12/05 Can each boiler be worked separately yes Area of fire grate in each boiler 61 sq No. and Description of safety valves to

each boiler Two, direct spring Area of each valve 8.29 Pressure to which they are adjusted 185 lb Are they fitted with easing gear no

Smallest distance between boilers or uptakes and bunkers or woodwork 18 (Rule Mean dia. of boilers 14-9 1/4 Length 11-6 Material of shell plates steel

Thickness 1 1/2 Range of tensile strength 29 ton Are they welded or flanged no Descrip. of riveting: cir. seams by SR long. seams 5798-TR

Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 18 1/2

Per centages of strength of longitudinal joint rivets 84.1 Working pressure of shell by rules 180.5 lb Size of manhole in shell 16x12 in end

Size of compensating ring flanged No. and Description of Furnaces in each boiler Three, bright Material steel Outside diameter 47 1/2

Length of plain part top Thickness of plates crown Description of longitudinal joint weld No. of strengthening rings —

Working pressure of furnace by the rules 185.5 lb Combustion chamber plates: Material steel Thickness: Sides 2 1/2 Back 2 1/2 Top 2 1/2 Bottom 1 1/8

Pitch of stays to ditto: Sides 12 1/2 x 9 Back 11 x 10 1/2 Top 2 1/2 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180.5 lb

Material of stays steel Diameter at smallest part 1 1/8 x 1 7/8 Area supported by each stay 116 1/2 Working pressure by rules 184 1/2 End plates in steam space:

Material steel Thickness 1 1/2 Pitch of stays 27 x 20 1/8 How are stays secured 57 x 11 Working pressure by rules 180.78 lb Material of stays steel

Diameter at smallest part 1 1/2 Area supported by each stay 54 1/2 Working pressure by rules 180.74 Material of Front plates at bottom steel

Thickness 1 3/8 Material of Lower back plate steel Thickness 1 Greatest pitch of stays 14 1/2 x 10 1/8 Working pressure of plate by rules 181.7 lb

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates steel Thickness: Front 1 1/8 Back 1 1/8 Mean pitch of stays 4 1/2 x 4 1/2

Pitch across wide water spaces 13 1/2 Working pressures by rules 258 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 8 1/2 x 2 Length as per rule 294 Distance apart 12 3/8 Number and pitch of Stays in each Two 9

Working pressure by rules 193 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— No. *One* Description *See accompanying report.*

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 _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____

Descrip. of riveting long. seams _____ Dia. 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 Bolts and nuts for connecting rod top ends 2 ditto bottom ends 2 ditto for main bearings 1 set coupling bolts and nuts. 1 set feed and bilge pump valves, assorted bolts, nuts, and iron.*

The foregoing is a correct description,
NORTH EASTERN MARINE ENGINEERING CO LTD. Manufacturer.
Water, Seattle Bay

Dates of Survey while building { During progress of work in shops - - } 1905: Aug. 15, 17, Nov. 2, 7, 13, 16, 17, 20, 22, 23, 25, 29, 30, Decr. 1, 4, 8, 11, 13, 15, 19, - 06 - Jan 8.
 { During erection on board vessel - - } 10, 16, 17, 1905 Decr. 9, 13, 22, 1906 Jan 22, 24, 29, Feb 8, 9, 12.
 Total No. of visits *24* (*12ab*)g Is the approved plan of main boiler forwarded herewith *Yes*

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

The Machinery of this Vessel has been constructed under special survey, the material & workmanship sound & good, the Boilers & Steam pipes have been tested by hydraulic pressure in accordance with the requirements of the Rules, the Machinery worked satisfactorily at the Moorings & the Safety Valves have been adjusted to their working pressure under steam.

*This Vessel is Eligible in Our Opinion to have the Notation * LMC 2, 06 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD LMC 2, 06 FD.

The amount of Entry Fee. . . £ 3 :
 Special £ 37 : 7
 Donkey Boiler Fee £ :
 Travelling Expenses (if any) £ :
 When applied for, 22.2.06
 When received, 5/2/06

W. Byrd & R.D. Shilston
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 23 FEB 1906

Assigned

+ LMC 2, 06

MACHINERY CERTIFICATE WRITTEN



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Gunderland

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