

# REPORT ON MACHINERY.

No. 22798

MON. 25 JUN 1906

Port of Sunderland

Received at London Office

No. in Survey held at Sunderland

Date, first Survey 12<sup>th</sup> February, 1906 Last Survey 8<sup>th</sup> May 1906

Book. 25. on the Engines & Boilers of the Antwerp No 30 S/S "Mortar"

(Number of Visits 27)

Gross 1218

ster Michieles Built at Antwerp By whom built Chantiers Navals Anvers When built 1906

ines made at Sunderland By whom made North Eastern Marine Eng<sup>y</sup> Co. Ld. when made 1906

lers made at Sunderland By whom made North Eastern Marine Eng<sup>y</sup> Co. Ld. when made 1906

istered Horse Power 133 Owners D. Ripcovitch Port belonging to Trieste

n. Horse Power as per Section 28 133 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

o. of Cylinders 14-28-46 Length of Stroke 33 Revs. per minute 45 Dia. of Screw shaft 9.23 Material of screw shaft Iron

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

the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part

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

rs are fitted, is the shaft lapped or protected between the liners No Length of stern bush 3-6

z. of Tunnel shaft 8.32 Dia. of Crank shaft journals 8.74 Dia. of Crank pin 9 Size of Crank webs 5.5 x 13.2 Dia. of thrust shaft under

lars 9 Dia. of screw 13-0 Pitch of Screw 13-6 No. of Blades four State whether moveable No Total surface 53 sq

of Feed pumps two Diameter of ditto 2.3 Stroke 15 Can one be overhauled while the other is at work Yes

of Bilge pumps two Diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work Yes

of Donkey Engines Two Sizes of Pumps 7.2 x 8.2 x 6.5 x 3.2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps

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

one in tunnel well 2 1/2 Suctions to all ballast tanks 3 1/2

of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump  pumps a separate Donkey Suction fitted in Engine room & size 2 1/2

re 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

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

re 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 Yes

re 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

hat pipes are carried through the bunkers none How are they protected Yes

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

re the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

ates of examination of completion of fitting of Sea Connections 17/5/06 of Stern Tube 17/5/06 Screw shaft and Propeller 17/5/06

the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room.

ILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons Ld., & the Deighton Co. Ld.

total Heating Surface of Boilers 2159 sq Is Forced Draft fitted No No. and Description of Boilers One single ended, Repl<sup>t</sup> Mull<sup>t</sup>

orking Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 8/5/06 No. of Certificate 2484

an each boiler be worked separately No Area of fire grate in each boiler 60 sq No. and Description of Safety Valves to

ch boiler 2 Spring Area of each valve 7.17 Pressure to which they are adjusted 165 lbs Are they fitted with easing gear Yes

allest distance between boilers or uptakes and bunkers or woodwork 18" Dia. of boilers 14-9 1/8 Length 10-6 Material of shell plates steel

ickness 1 1/2 Range of tensile strength 29 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Exp. DR.

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

er centages of strength of longitudinal joint rivets 89.15 Working pressure of shell by rules 160 lbs Size of manhole in shell end 16 x 12

ize of compensating ring flanged No. and Description of Furnaces in each boiler three, Deighton Material steel Outside diameter 4 1/2

length of plain part top Thickness of plates crown Description of longitudinal joint Weld No. of strengthening rings —

orking pressure of furnace by the rules 160.4 Combustion chamber plates: Material steel Thickness: Sides 3/4 Back 25/32 Top 3/4 Bottom 1/8

itch of stays to ditto: Sides 8 3/4 x 2 1/8 Back 11 x 1 1/8 Top 8 3/4 x 2 1/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 160.4

aterial of stays steel Diameter at smallest part 1.63 Area supported by each stay 150, 131, 113 Working pressure by rules 164 lbs End plates in steam space:

aterial steel Thickness 1 3/8 Pitch of stays 19 1/2 x 2 1/4 How are stays secured DN + W Working pressure by rules 161.4 Material of stays steel

Diameter at smallest part 3.28 Area supported by each stay 128 Working pressure by rules 161.6 Material of Front plates at bottom steel

Thickness 3/4 Material of Lower back plate steel Thickness 29/32 Greatest pitch of stays 11 x 14 3/4 Working pressure of plate by rules 164.6

Diameter of tubes 3 1/4 Pitch of tubes 4 3/8 x 4 7/8 Material of tube plates steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10 5/32

Pitch across wide water spaces 14 1/2 Working pressures by rules 164.9 Girders to Chamber tops: Material steel Depth and

ickness of girder at centre 8 5/8 x 1 3/4 Length as per rule 29 1/2 Distance apart 12 1/8 Number and pitch of stays in each two 8 3/4

orking pressure by rules 161.5 Superheater or Steam chest; how connected to boiler — Can the superheater be shut off and the boiler worked

eparately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet

oles — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —

of stiffened with rings — Distance between rings — Working pressure by rules — End plates: Thickness — How stayed —

orking pressure of end plates — Area of safety valves to superheater — Are they fitted with easing gear —

VERTICAL DONKEY BOILER— Manufacturers of Steel

STF  
 FLAT PLATE (If Bar Keel GARBOARD)  
 State actual thickness in way of Doubt Bottom.  
 Write 'Sheer Strake' opposite its corresponding letter.  
 DOUBLING O  
 Length and thickness }  
 POOP SIDE  
 RAISED QU  
 BRIDGE SI  
 FORECASTI  
 LENGTHS  
 Manu  
 manufactu  
 Plates, out  
 Has the St  
 FRAMES  
 REVERSI  
 LOWER M  
 Bowsprit  
 Topmasts,  
 Riggings,  
 Sails.  
 Equipm  
 Number of Certificate.  
 28961  
 5644  
 5645  
 5672  
 5673  
 Number of Certificate  
 5404  
 Boats  
 Pumps,  
 Windla  
 Engine  
 What ar  
 Coal Bu  
 Number  
 Ceiling  
 Cargo l  
 State siz  
 Number  
 Bulwar  
 The abo  
 Builder  
 Rpt.

No. Description  
 Made at By whom made When made Where fixed  
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of S  
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment  
 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  
 Working pressure of shell by rules 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  
 Working pressure of furnace by rules Thickness of furnace crown plates Stayed by  
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— One set of connecting rod top & bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts & nuts, 1 set feed & bilge pump valves, Propeller, safety valve springs, check valves, Air circulating pump valves, &c.

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

Dates of Survey while building  
 During progress of work in shops - 1906: Feb'y 12, 14, 27, Mch 5, 15, 16, 21, 23, 26, 28, 29, Apl. 2, 5, 8, 9, 10, 14, 20, 21, 26, 27, 30, May 1, 5, 6, 7, 8,  
 During erection on board vessel - 1906 May 18, 31 June 5, 6, 12.  
 Total No. of visits 27 + 5 = 32.

Is the approved plan of main boiler forwarded herewith  Yes  No  
 " " " " donkey " " "  No  
 Dates of Examination of principal parts—Cylinders 27/14/21/9/3/5 Slides — Covers 15/3 Pistons 15/3 26/14 Rods 14/3 19/14  
 Connecting rods 12/1 14/2 Crank shaft 28/7/24/3/5 Thrust shaft 24/4 Tunnel shafts 3/5 4/5 Screw shaft 24/4 1/5 Propeller 24/4  
 Stern tube — Steam pipes tested 31/5/06 Engine and boiler seatings 28/5/06 Engines holding down bolts 5/6/06  
 Completion of pumping arrangements 4/6/06 Boilers fixed 4/6/06 Engines tried under steam 4/6/06  
 Main boiler safety valves adjusted 4/6/06 Thickness of adjusting washers 3 3/8 P. 7/16  
 Material of Crank shaft Steel Identification Mark on Do. LLOYDS 304 D AB Material of Thrust shaft Steel Identification Mark on Do. R 1577  
 Material of Tunnel shafts Steel Identification Marks on Do. as under No. 1 1656 2-M-06 No. 2 96 2-M-06 No. 3 143 2-M-06 No. 4 291 2-M-06  
 Material of Steam Pipes Copper Test pressure 320 lbs per sq in.

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The machinery of this vessel has been constructed under open survey, the material & workmanship sound & good. The Main Boiler has been tested by hydraulic pressure in accordance with the Rules, together with the Engine stop Valve & Boiler stop Valve.

The machinery & boilers have been fitted on board in accordance with the Rules. The safety valves have been adjusted under steam to blow off at 165 lbs per sq in.

The Engines worked well under steam.  
 The machinery is eligible in our opinion for the record of + L.M.C. 6.06

It is submitted that this vessel is eligible for THE RECORD I.L.M.C 6.06.

The amount of Entry Fee... £ 2 : : When applied for, 29.5.19.06  
 Special £ 13 : 6 : :  
 Donkey Boiler Fee £ 6 : 13 : :  
 Travelling Expenses (if any) £ : : :  
 Committee's Minute TUES. 26 JUN 1906

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
 J. P. Cornish

Assigned + L.M.C 6.06



REPORT  
 the Port of  
 Name  
 Port  
 Date  
 Dept. Date  
 turned  
 be returned to the