Rpt. 4.

REPORT ON MACHINERY.

No. 60962

Received at London Office MON. SEP. 4 - 1911

Date of writing Report Aug. 31st 1911. When handed in at Local Office Aug 31st 1911. Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. 5 Supp. Survey held at North Shields. Date, First Survey 13th June Last Survey 28th Aug 1911 (Number of Visits 11)

on the Machinery of the S/S "Miura" Tons Gross 220 Net

Master Built at Middlesbrough By whom built Smiths Dock Co. Ltd When built 1911.

Engines made at North Shields By whom made Shields Engineering Co. Ltd when made 1911

Boilers made at Middlesbrough By whom made Richardsons West Hartl & Co. Ltd when made 1911

Registered Horse Power Owners Neale and West Port belonging to Cardiff.

Nom. Horse Power as per Section 28 80.1 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

Shelter Dk. 24'.

ENGINES, &c.—Description of Engines Direct Acting Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12½" - 21" - 35" Length of Stroke 26" Revs. per minute 110 Dia. of Screw shaft as per rule 7.5" as fitted 7 5/16" Material of screw shaft S. Iron

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 No. If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3'-0"

Dia. of Tunnel shaft as per rule 6.57 as fitted Not Fitted Dia. of Crank shaft journals as per rule 6.88 as fitted 7⅛" Dia. of Crank pin 7⅛" Size of Crank webs 10½ x 4 5/16" Dia. of thrust shaft under collars 7⅛" Dia. of screw 9'-6" Pitch of Screw 9'-9" No. of Blades 4 State whether moveable No Total surface 30.4 ☐ft

No. of Feed pumps 2 Diameter of ditto 2½" Stroke 12" Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2 Diameter of ditto 2½" Stroke 12" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines 2 Sizes of Pumps 6" x 3 x 6" / 6" x 4 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 - 2" diam. and one Ejector In Holds, &c. 2 - 2" diam. in Slush well.

No. of Bilge Injections One sizes 3½" Connected to condenser, or to circulating pump Circulating 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 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.

Dates of examination of completion of fitting of Sea Connections 15/8/11 of Stern Tube 15/8/11 Screw shaft and Propeller 15/8/11.

Is the Screw Shaft Tunnel watertight No tunnel Is it fitted with a watertight door ✓ worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel David Colville & Sons Ltd & John Spencer & Sons Ltd

Total Heating Surface of Boilers 1406 ☐ft Is Forced Draft fitted No No. and Description of Boilers One Single ended Cylindrical

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 4/8/11 No. of Certificate 4710

Can each boiler be worked separately ✓ Area of fire grate in each boiler 40.5 ☐ft No. and Description of Safety Valves to each boiler Two, Spring loaded Area of each valve 4.9 ☐" 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 1'-6" Mean dia. of boilers 13'-0" Length 10'-6" Material of shell plates Steel

Thickness 13/64" Range of tensile strength 28.75/32 Tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. LAP.

long. seams See Report Diameter of rivet holes in long. seams attached Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

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

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

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

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

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W849-0006

VERTICAL DONKEY BOILER— *Manufacturers of Steel* .....

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 Safe*

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* ..... *Plates* .....

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* ..... *Radius of do.* ..... *Stayed by* .....

Diameter of uptake ..... *Thickness of uptake plates* ..... *Thickness of water tubes* ..... *Dates of survey* .....

SPARE GEAR. *State the articles supplied :—* Two Top end bolts and nuts. two bottom end bolts and nuts, two main bearing bolts and nuts; one set of coupling bolts and nuts. One set of feed and bilge pump valves: Feed pump and relief valve springs: bar and sheet iron: a quantity of bolts and nuts.

FOR THE SUNDERLAND ENGINEERING & DRY DOCK Co., LIMITED.
Engine Works Manager

The foregoing is a correct description,

Manufacturer. J. R. Richardson

Dates of Survey while building — *During progress of work in shops* — *During erection on board vessel* — 1911 Jun. 13. Jul. 5. 7. 12. 19. 31. Aug. 3. 17. 18. 23. 28

Total No. of visits 11 *Is the approved plan of main boiler forwarded herewith* No.

donkey ✓

Dates of Examination of principal parts — *Cylinders* 28/7/11 *Slides* 3/8/11 *Covers* 31/7/11 *Pistons* 31/7/11 *Rods* 31/7/11

Connecting rods 3/8/11 *Crank shaft* 1/6/11 *Thrust shaft* 30/5/11 *Tunnel shafts* ✓ *Screw shaft* 1/6/11 *Propeller* 18/7/11

Stern tube 12/7/11 *Steam pipes tested* 23/8/11 *Engine and boiler seatings* 16/8/11 *Engines holding down bolts* 18/8/11

Completion of pumping arrangements 28/8/11 *Boilers fixed* 18/8/11. *Engines tried under steam* 28/8/11.

Main boiler safety valves adjusted 28/8/11. *Thickness of adjusting washers* F.V. 3/8" A.V. 11/32"

Material of Crank shaft Best Scrap *Identification Mark on Do.* 2770 *Material of Thrust shaft* S. Iron *Identification Mark on Do.* 2770

Material of Tunnel shafts ✓ *Identification Marks on Do.* ✓ *Material of Screw shafts* S. Iron *Identification Marks on Do.* 2770.

Material of Steam Pipes Copper. Solid drawn. No 4. W.G. *Test pressure* 400 lbs per □.

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

The Engines and Boiler of this Vessel 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 Notation ✠ L.M.C. 8-11 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. ✠ LMC 8.11

J.S.M. 4/9/11 A.R.J.

Certificate (if required) to be sent to NEWCASTLE ON TYNE.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£	1 : 0 : 0	When applied for, SEP 2 1911 19....	9.10.11
Special	£	7 : 6 : 0		
Donkey Boiler Fee	£	8 : 6 : 0	When received, 29/9/11 19....	
Travelling Expenses (if any)	£	: :		

Committee's Minute TUE. OCT. 31. 1911

Assigned + LMC 8.11

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

MACHINERY CERTIFICATES WRITTEN

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