Rpt. 4.

REPORT ON MACHINERY. No. 9380.

Received at London Office SAT. 17 JUN. 1916

Date of writing Report June 16 1916 Port of Middlesbrough

No. in Reg. Book 106 Survey held at Middlesbrough Date, First Survey April 1916 Last Survey June 13th 1916 (Number of Visits 30)

on the S.S. "Miura" Tons Gross / Net

Master Built at Middlesbro' By whom built Smith's Dock Co. Ltd When built 1916

Engines made at Middlesbrough By whom made Smith's Dock Co. Ltd (No. 126) when made 1916

Boilers made at Newcastle By whom made Palmer's S.B. & Iron Co. Ltd (No. 806a) when made 1916

Registered Horse Power Owners Neale & West, Ltd Port belonging to Cardiff

Nom. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

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

Dia. of Cylinders 12½" 21" 35" Length of Stroke 26" Revs. per minute 104 Dia. of Screw shaft as per rule 7.55" as fitted 7 5/8" Material of screw shaft 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 ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2'-10"

Dia. of Tunnel shaft as per rule 6.57" as fitted 6¾" Dia. of Crank shaft journals as per rule 6.9" as fitted 7 1/16" Dia. of Crank pin 7 1/8" Size of Crank webs 10¾" x 4 9/16" Dia. of thrust shaft under collars 7 1/8" Dia. of screw 9'-6" Pitch of Screw 11'-1½" No. of Blades 4 State whether moveable No Total surface 35½ 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 One Sizes of Pumps 5" x 3½" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 2" In Holds, &c. Two 2"

Ejector suction from Engine room & hold & discharge overboard

No. of Bilge Injections 1 sizes 3½" Connected to condenser, or to circulating pump Pump 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 Winch pipes & hold suctions How are they protected Wood casing

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 1. 5. 16 of Stern Tube 1. 5. 16 Screw shaft and Propeller 1. 5. 16

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams 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

W6707 0021

IS A DONKEY BOILER FITTED? No ✓ If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied :— Two top & two bottom end connecting rod bolts & nuts. Two main bearing bolts & nuts. One set of coupling bolts & nuts. One set of feed & bilge pump valves Main & donkey feed check valves, Assorted bolts & nuts etc

The foregoing is a correct description,

For Smith's Dock Co Ltd

J Abbott

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1916 Apl 4 12 13 26 27 May 1 4 8 10 12 15 17 18 19 20 22 24 26 29 31 Jun 1 2 3 5 6 7 8 9 12 13
{ During erection on board vessel - - - }
{ Total No. of visits 30. }

Is the approved plan of main boiler forwarded herewith Midd. Rpt 9 S. S. Burne

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 12.5.16 Slides 19.5.16 Covers 19.5.16 Pistons 17.5.16 Rods 17.5.16

Connecting rods 18.5.16 Crank shaft 8.9.15 Leith Rpt Thrust shaft 14.9.15 Tunnel shafts None Leith Rpt Screw shaft 19.11.15 Propeller 27.4.16

Stern tube 27.4.16 Steam pipes tested 31.5.16 Engine and boiler seatings 1.5.16 Engines holding down bolts 29.5.16

Completion of pumping arrangements 6.6.16 Boilers fixed 5.6.16 Engines tried under steam 6.6.16

Main boiler safety valves adjusted 6.6.16 Thickness of adjusting washers PV 9/32" SV 9/32"

Material of Crank shaft Steel Identification Mark on Do. 4124GA Material of Thrust shaft Iron Identification Mark on Do. 4124GA

Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 4124GA

Material of Steam Pipes Solid drawn copper ✓ Test pressure 360 lbs ✓

Is an installation fitted for burning oil fuel No ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case yes ✓ If so, state name of vessel S.S. "Hirose" herewith ✓

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

The Engines of this vessel have been constructed under Special Survey, and are of good material and workmanship

The Engines and Boiler of this vessel have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of +LMC 6.16 in the Register Book.

Middlesbrough

It is submitted that this vessel is eligible for THE RECORD +LMC 6.16

AWD 20/6/16

The amount of Entry Fee ... £ 1 : 0 : When applied for, 16/6/1916

Special ... ... £ 7 : 13 : When received, 24/6/16

Donkey Boiler Fee ... £ : : When received, 24/6/16

Travelling Expenses (if any) £ : :

Committee's Minute TUE. 20 JUN. 1916

Assigned + LMC 6.16

MACHINERY CERTIFICATE WRITTEN.

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