

## REPORT ON MACHINERY.

No. 69097

Received at London Office 10th AUG 1916

Date of writing Report 7th August 1916 When handed in at Local Office 10th August 1916 Port of NEWCASTLE ON TYNE  
 No. in Survey held at Newcastle Date, First Survey 8th Feb 1915 Last Survey 25th July 1916  
 Reg. Book. on the S.S. "Southern" Number of Volls 64 Gross 5694 Net 4229

Master Built at Newcastle By whom built W. Dobson & Co. When built 1916

Engines made at Newcastle By whom made North Eastern Marine Eng Co. when made 1916

Boilers made at Newcastle By whom made do. when made 1916

Registered Horse Power Owners Harris & Dixon Ltd. Port belonging to London

Nom. Horse Power as per Section 28 4.55 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 26" - 43" - 72" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 14.6" Material of steel as fitted 15" screw shafts

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 5' - 6"

Dia. of Tunnel shaft as per rule 13.05" Dia. of Crank shaft journals as per rule 13.7" Dia. of Crank pin 13 7/8" Size of Crank webs 21" x 8 3/4" Dia. of thrust shaft under

collars 13 7/8" Dia. of screw 17' - 9" Pitch of Screw 17' - 9" No. of Blades 4 State whether moveable no Total surface 9.6 sq

No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 26" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 6" x 8" x 8" & 7" x 4 1/2" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3 1/2" In Holds, &c. 2 in each hold 3 1/2", one in tunnel

well 3 1/2"

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room of size yes 3 1/2"

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 Both

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 21-3-16 of Stern Tube 21-3-16 Screw shaft and Propeller 30-6-16

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Lap platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. H. Preece & Sons

Total Heating Surface of Boilers 6333 sq Is Forced Draft fitted yes No. and Description of Boilers Three, single-ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5-4-16 No. of Certificate 8854

Can each boiler be worked separately yes Area of fire grate in each boiler 47.25 sq No. and Description of Safety Valves to

each boiler Two, spring Area of each valve 8.29 sq 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 30" Mean dia. of boilers 13' - 9 3/4" Length 11' - 6" Material of shell plates Steel

Thickness 1 3/32" Range of tensile strength 28 3/4 - 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams & Lap

long. seams 5BS Y Rivet Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 18"

Per centages of strength of longitudinal joint rivets 8.6-7 plates 8.6-4 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3, sighted Material Steel Outside diameter 40"

Length of plain part top Thickness of plates crown 1 1/2" Description of longitudinal joint welded No. of strengthening rings

bottom Thickness of plates bottom 1 1/2" Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 7/8"

Pitch of stays to ditto: Sides 10 1/2" x 9 3/4" Back 10 1/2" x 9 3/4" Top 10 1/2" x 9 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbs

Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 98.4 sq Working pressure by rules 180 lbs End plates in steam space

Material Steel Thickness 1 3/8" Pitch of stays 24" x 19 3/4" How are stays secured nuts & 10 Working pressure by rules 185 lbs Material of stays Steel

Diameter at smallest part 8.29" Area supported by each stay 47.4 sq Working pressure by rules 184 lbs Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 29/32" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 189 lbs

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 7 1/2"

Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 8 3/4" x 1 3/4" Length as per rule 32" Distance apart 10 1/2" Number and pitch of stays in each 2 - 9 3/4"

Working pressure by rules 187 lbs Superheater or Steam chest; how connected to boiler none 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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If so, is a report now forwarded? ✓

The foregoing is a correct description,

FOR THE NORTH-EASTERN MARINE ENGINEERING CO. LD.

*Manufacturer.*

Is the approved plan of main boiler forwarded herewith

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 East Wales

TRK RECORD + LMC 7-16. F.D.

IM Fur 29/8

Special ... 242 15 0

Donkey Boiler. Has 12 ft. dia. x 12 ft. high. When received.

Travelling Expenses (if any) \$ 10.00

Committee's Minute

*Assigned*

THE 29 AUG 1916

+ Lm 6. 7. 16

Charles Cooper & Thomas Field  
Engineers Surveyors Lloyd's Register of British & Foreign Shipping.

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

Lloyd's Register  
Foundation