

REPORT ON MACHINERY.

No. 71285

Date of writing Report 24th August 1918 When handed in at Local Office

Received at London Office

Port of

NEWCASTLE-UPON-TYNE 1918

No. in Survey held at NewcastleDate, First Survey 16th April 1918 Last Survey 18th Sept. 1918Reg. Book. on the S.S. "Wae Javelin"(Number of Volls 53)Gross 2343Net 1327Master Built at Newcastle By whom built Wood Skinner & Co When built 1918Engines made at Newcastle By whom made H. E. Mainwaring & Co 2388 when made 1918Boilers made at do By whom made do 2388 when made 1918Registered Horse Power Owners The Shipping Controller Port belonging to LondonNom. Horse Power as per Section 28 265 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yesENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 22 - 36 - 59 Length of Stroke 39 Revs. per minute 76 Dia. of Screw shaft as per rule 12.36 Material of SteelIs 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 tightin the propeller boss yes If the liner is in more than one length are the joints burned yes If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If twoliners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 4'-10"Dia. of Tunnel shaft as per rule 10.857 Dia. of Crank shaft journals as per rule 11.3996 Dia. of Crank pin 11 3/4" Size of Crank webs 18" x 7 1/4" Dia. of thrust shaft undercollars 12" Dia. of screw 15'-6" Pitch of Screw 15'-9" No. of Blades 4 State whether moveable no Total surface 75 sqNo. of Feed pumps 2 Diameter of ditto 3" Stroke 24" Can one be overhauled while the other is at work yesNo. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work yesNo. of Donkey Engines 3 Sizes of Pumps 10" x 12 1/2" x 18", 8" x 6" x 15" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Three 3" In Holds, &c. Forward and After main holds 2-3"After hold well 1-3" Tunnel well 1-2 1/2"No. of Bilge Injections 2 sizes 7" & 6 1/2" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 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 noneAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks BothAre they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates yes Are the Discharge Pipes above or below the deep water line BelowAre 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 yesWhat pipes are carried through the bunkers none How are they protected yesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 10.5.18 of Stern Tube 10.5.18 Screw shaft and Propeller 1.8.18Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door no worked from yesOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spence & SonsTotal Heating Surface of Boilers 4500 sq Is Forced Draft fitted no No. and Description of Boilers Two, single-endedWorking Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 1-23.7.18 No. of Certificates 1-9/21Can each boiler be worked separately yes Area of fire grate in each boiler 62 sq No. and Description of Safety Valves toeach boiler Two Spring Area of each valve 8.29 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15'-6" Length 10'-6" Material of shell plates SteelThickness 1 1/4" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 8 LapLong. seams 8 BS & Rivet Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9" Lap of plates or width of butt straps 19 1/2"Percentages of strength of longitudinal joint rivets 87.5 Working pressure of shell by rules 184 lbs Size of manhole in shell 16" x 12"Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 - Brighton Material Steel Outside diameter 49 3/16"Length of plain part top 37" Thickness of plates bottom 64" Description of longitudinal joint Welded No. of strengthening rings yesWorking pressure of furnace by the rules 183 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 1/16"Pitch of stays to ditto: Sides 9 3/4" x 9" Back 9 5/8" x 9 1/2" Top 9 3/4" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 186 lbsMaterial of stays Steel Diameter at smallest part 2.03" Area supported by each stay 91.4 sq Working pressure by rules 200 lbs End plates in steam space:Material Steel Thickness 1 3/8" Pitch of stays 22" x 21" How are stays secured in 10 Working pressure by rules 193 lbs Material of stays SteelDiameter at smallest part 8.29" Area supported by each stay 46.2 sq Working pressure by rules 187 lbs Material of Front plates at bottom SteelThickness 1 3/16" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 206 lbsDiameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 1 3/16" Back 1 3/16" + 3/4" Mean pitch of stays 11 1/8"Pitch across wide water spaces 14 1/4" Working pressures by rules 191 lbs Girders to Chamber tops: Material Steel Depth andThickness of girder at centre 7 1/2" x 1 3/4" Length as per rule 32" Distance apart 9" Number and pitch of stays in each 2 - 9 3/4"Working pressure by rules 180 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler workedseparately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivetyes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yesStiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yesWorking pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
SPARE GEAR. State the articles supplied:— Two top end, two bottom end & two main bearing bolts & nuts, a set of coupling bolts, a set of feed & bilge pump valves, a quantity of assorted bolts nuts & iron & a propeller.

The foregoing is a correct description;

per pro NORTH EASTERN MARINE ENGINEERING CO., LTD.

P. D. Harrison Secretary

Manufacturer.

Dates of Survey while building
During progress of work in shops -- Apr. 16, 17, 18, 24, 25, 30 May 1, 2, 3, 6, 7, 10, 11, 14, 15, 16, 17, 21, 22, 23, 24, 27, 28, 30, 31 Jun 5, 18, 20 Jul 1, 3, 8, 10, 11, 15, 16, 17, 18, 22
During erection on board vessel -- 24, 26, 30 Aug 1, 2, 6, 16, 20, 21, 26, 31 Sept 7, 12, 17, 18
Total No. of visits 53. Is the approved plan of main boiler forwarded herewith No
" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 18.7.18 Slides 11.7.18 Covers 8.7.18 Pistons 8.7.18 Rods 8.7.18
Connecting rods 8.7.18 Crank shaft 23.5.18 Thrust shaft 6.5.18 Tunnel shafts 24.5.18 Screw shaft 18.6.18 Propeller 16.7.18
Stern tube 30.4.18 Steam pipes tested 16.8.18 Engine and boiler seatings 10.5.18 Engines holding down bolts 19.8.18
Completion of pumping arrangements 20.8.18 Boilers fixed 6.8.18 Engines tried under steam 20.8.18
Main boiler safety valves adjusted 20.8.18 Thickness of adjusting washers PB. $P\frac{1}{2}$ S $\frac{7}{8}$ SB. $P\frac{7}{8}$ S $\frac{5}{8}$
Material of Crank shaft Steel Identification Mark on Do. Y X 5.18 Material of Thrust shaft Steel Identification Mark on Do. Y X 5.18
Material of Tunnel shafts Steel Identification Marks on Do. Y X 5.18 Material of Screw shafts Steel Identification Marks on Do. Y X 6.18
Material of Steam Pipes Iron Test pressure 540 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 Standard H.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boiler of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 8.18. A report on the electric installation will be forwarded when received from the electricians.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 9.18

27-9-18
MRP

The amount of Entry Fee ... £ : : When applied for, 18 SEP 1918
Special ... £ 52 : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : 27.9.18
Committee's Minute FR 27 SEP 1918
Assigned L.M.C. 9.18
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Thomas Field