

REPORT ON MACHINERY.

No. 12155

Date of writing Report 4th Jan. 1919 When handed in at Local Office 10th Jan. 1919 Port of Aberdeen Received at London Office MON 13 JAN 1919
 No. in Survey held at Aberdeen Date, First Survey May 1916 Last Survey December 18th 1918
 Reg. Book. on the Engines & Boiler No. 899 (Number of Visits 54)

Built at Aberdeen By whom built J. Abernethy & Co. Ltd. No. 899
 Engines made at Aberdeen By whom made J. Abernethy & Co. Ltd. No. 899
 Boilers made at Aberdeen By whom made J. Abernethy & Co. Ltd. No. 899
 Indicated Horse Power 86 Owners _____
 Horse Power as per Section 28 85.66 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

ENGINES, &c.—Description of Engines
 Type Triple Expansion No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 12 1/2 + 21 + 35 Length of Stroke 27 Revs. per minute _____
 Dia. of Screw shaft as per rule Material of screw shaft _____
 Is the after end of the liner made water tight _____
 If the liner does not fit tightly at the part _____
 If the liner is in more than one length are the joints burned _____
 If the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive _____
 If two _____
 If two _____
 Tunnel shaft as per rule 6.66 Dia. of Crank shaft journals as per rule 6.992 Dia. of Crank pin 7 1/8 Size of Crank webs 10 x 4 1/2 Dia. of thrust shaft under _____
 Dia. of screw 7 1/8 Pitch of Screw _____ No. of Blades _____ State whether moveable _____ Total surface _____
 Feed pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work yes
 Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work "
 Donkey Engines one Sizes of Pumps 3 1/2 + 5 1/2 + 5 duplex No. and size of Suctions connected to both Bilge and Donkey pumps _____
 In Holds, &c. _____

BOILERS, &c.— (Letter for record E. 24-11-18) Manufacturers of Steel The Glasgow Iron & Steel Co., Glasgow & Shields Iron
 Heating Surface of Boilers 1550 Is Forced Draft fitted _____ No. and Description of Boilers 1 single ended marine
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 18-12-18 No. of Certificate 959
 Can each boiler be worked separately _____ Area of fire grate in each boiler 48.75 No. and Description of Safety Valves to _____
 boiler two spring loaded Area of each valve 4.9 Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 Least distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers 13.6 Length 10.6 Material of shell plates S
 Thickness 1 3/32 Range of tensile strength 28-32 tons Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams d.r. lap
 seams r.d.b.s Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 1 row 2 rows 4 1/2 16 Lap of plates or width of butt straps 18 x 1 1/2
 Percentages of strength of longitudinal joint rivets 97.2 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12
 plate 96.2 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40 1/2
 of compensating ring M. Neil 2 rows Description of longitudinal joint weld No. of strengthening rings 1 on 4 in.
 Width of plain part top 7 1/2 Thickness of plates crown 3 1/4 bottom _____ Thickness: Sides 7/16 Back 7/16 Top 7/16 Bottom 7/16
 Working pressure of furnace by the rules 192 Combustion chamber plates: Material S Thickness: Sides 7/16 Back 7/16 Top 7/16 Bottom 7/16
 Height of stays to ditto: Sides 9 3/4 + 9 Back 10 + 9 1/2 Top 9 3/4 + 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 188
 Material of stays S Thickness at smallest part 1 5/8 Area supported by each stay 85 Working pressure by rules 219 End plates in steam space: _____
 Material S Thickness 1 3/32 Pitch of stays 19 + 19 How are stays secured double nuts Working pressure by rules 194 Material of stays S
 at smallest part 2 1/16 Area supported by each stay 361 Working pressure by rules 192 Material of Front plates at bottom S
 Thickness 3/8 Material of Lower back plate S Thickness 3/8 Greatest pitch of stays 13 1/4 + 9 1/2 Working pressure of plate by rules 184
 Diameter of tubes 3 1/2 Pitch of tubes 5 + 4 1/2 Material of tube plates S Thickness: Front 3/8 Back 3/8 Mean pitch of stays 9 3/4
 Distance across wide water spaces 13 1/2 Working pressures by rules 182 Girders to Chamber tops: Material S Depth and _____
 Thickness of girder at centre 9 + 1 1/2 Length as per rule 31 9/16 Distance apart 9 3/4 Number and pitch of stays in each 2-9
 Working pressure by rules 186 Steam dome: description of joint to shell None % of strength of joint _____
 Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____
 Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
 Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
 Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

W1060-0904

13/1/19



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top + 2 bottom end bolts + nuts, 2 main bearing + 1 set coupling bolts + nuts, 1 set each air, feed + bilge pump valves, 1 each main + donkey check valves, 1 safety valve spring, 6 junk ring bolts + nuts, 12 condenser tubes, 6 boiler tubes, 6 gauge glasses rings, 2 set firebars, 24 assorted bolts, 1 bundle iron, 12 split pins

The foregoing is a correct description, JAMES ABERNETHY & COMPANY LIMITED.

J. W. Abernethy

Manufacturer.

MANAGING DIRECTOR

Dates of Survey while building: During progress of work in shops (1916) May 1, June 16, July 5-17, Aug. 1-15, Sept. 15-29, Oct. 5 (1917) Mar. 7-26, April 3-20, May 9-28, June 28, July 5-30, Aug. 3; During erection on board vessel (1916) Nov. 4-27, Dec. 3-19 (1917) Oct. 7-14-21-29, Nov. 4-11, Dec. 2-7-10-17-18; Total No. of visits 34

Is the approved plan of main boiler forwarded herewith? Yes

Is the approved plan of donkey boiler forwarded herewith? Yes

Dates of Examination of principal parts: Cylinders 2-12-18, Slides 2-12-18, Covers 2-12-18, Pistons 2-12-18, Rods 2-12-18

Connecting rods 2-12-18, Crank shaft Kirkcaldy, Thrust shaft Greenock, Tunnel shafts Greenock, Screw shaft Greenock, Propeller Greenock

Stern tube Greenock, Steam pipes tested, Engine and boiler seatings, Engines holding down bolts

Completion of pumping arrangements, Boilers fixed, Engines tried under steam

Completion of fitting sea connections, Stern tube, Screw shaft and propeller

Main boiler safety valves adjusted, Thickness of adjusting washers

Material of Crank shaft S, Identification Mark on Do. H290 (KIR), Material of Thrust shaft S, Identification Mark on Do. 327 (Greenock)

Material of Tunnel shafts, Identification Marks on Do., Material of Screw shafts, Identification Marks on Do.

Material of Steam Pipes, Test pressure

Is an installation fitted for burning oil fuel, 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? No, If so, state name of vessel

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

The machinery + Boiler have been constructed under special survey in accordance with the Secretary's letter the Rules and approved plan and will be shipped to Spain to be fitted in the vessel. Materials and workmanship are good. The machinery is eligible in my opinion to have notation LMC with date when it has been properly fitted in the vessel and tried under steam with satisfactory results.

The engines + boiler are being shipped to Spain by Messrs J. G. Kincaid & Co. of Greenock, and the intermediate + tail shafts also propeller stern tube have been manufactured by them.

Certificate (if required) to be sent to the Surveyors not requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 1 : 0 : When applied for, Special ... £ 12 : 18 : 10-1-1919, Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 12-19-1919

H. Wilson, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See Cd's report no 797



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