

# REPORT ON MACHINERY.

No. 72378

Writing Report 19 When handed in at Local Office 20 OCT 1919 Port of NEWCASTLE-ON-TYNE 21 OCT 1919  
 Survey held at Newcastle on Tyne Date, First Survey 29 May 1919 Last Survey 16 October 1919  
 on the Screw Steamer 42 No 281 (64 Coaster) "AFON GWILLI" (Number of Visits 19)  
 Built at Southampton By whom built Camper & Nicholsons  
 Engines made at South Shields By whom made Shields Eng. & Dry Dock Co. L<sup>td</sup>  
 Repairs made at Newcastle By whom made Wallsend Slipway Co.  
 Indicated Horse Power Owners Port belonging to

Horse Power as per Section 28 129 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted

INES, & Co. — Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three

No. of Cylinders 16-24-44 Length of Stroke 30 Revs. per minute Dia. of Screw shaft as per rule 9.23" Material of screw shaft as fitted 9.2" Iron

Screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight

propeller boss If the liner is in more than one length are the joints burned the liner does not fit tightly at the part

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush 8' 2 1/2"

of Tunnel shaft as per rule 8.09" Dia. of Crank shaft journals as per rule 8.19" Dia. of Crank pin 8 3/4" Size of Crank webs 5 1/2 x 16 1/2" Dia. of thrust shaft under

with 8 3/4" Dia. of screw 11.6" Pitch of Screw 13.6" No. of Blades 4 State whether moveable No. Total surface 4459 sq. ft.

of Feed pumps 2 Diameter of ditto 2 5/8" Stroke 15" Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 2 5/8" Stroke 15" Can one be overhauled while the other is at work Yes

of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

in Holds, &c.

Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

All the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

All connections with the sea direct on the skin of the ship Are they Valves or Cocks

Do they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Do they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

Do the pipes are carried through the bunkers How are they protected

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

The Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

The Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

of STEELERS, & Co. — (Letter for record ) Manufacturers of Steel

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 9241

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

boiler Area of each valve 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 Length Material of shell plates

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

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

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

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

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

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

No. of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area 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

Area 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

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 Steam dome: description of joint to shell % of strength of joint

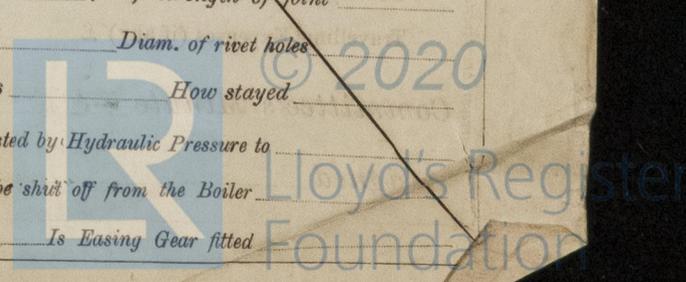
Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Working pressure of shell by rules Crown plates Thickness How stayed

of SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Pressure to which each is adjusted Is Easing Gear fitted



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied :- 2 Top End bolts & nuts, 2 Bottom End bolts & nuts, 2 main bearing bolts and nuts, 6 Coupling bolts & nuts, 1 set of Air, Circulating, Feed, & Bilge pump valves, 1 Feed check valve (Main) & 1 Auxiliary feed check valve, 2 Feed pump escape valves, 50 Bolts and nuts assorted, 6 cylinder cover studs & nuts, 6 steam chest cover studs & nuts, 12 junk king studs & nuts, 8 Condenser tubes & No. Ferrules, and packing.

The foregoing is a correct description,

For the Shields Engineering & Dry Dock Co. North Shields. E. S. Bradshaw Manufacturer.

Oct 15/19

Dates of Survey while building: During progress of work in shops -- May 29, June 19, 30, July 2, 8, 14, 30, Aug 7, 15, 18, 20, 25, 27, 28, Sep 2, 4, 16, 7. During erection on board vessel -- Total No. of visits 19

Is the approved plan of main boiler forwarded herewith to

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 15/8/19 Slides 24-8-19 Covers 25/8/19 Pistons 1/5/19 Rods 1/5/19 Connecting rods 26/8/19 Crank shaft 1/5/19 Thrust shaft 2/9/19 Tunnel shafts Screw shaft 8/7/19 Propeller 8/7/19 Stern tube 14/8/19 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 Iron Identification Mark on Do. 4335 Material of Thrust shaft Iron Identification Mark on Do. 4720 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 4526 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been constructed under special survey, and the materials and workmanship are found good. They are being forwarded to Messrs. Camper & Nicholson of Southampton to be fitted on board

NEWCASTLE-ON-TYNE

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

The amount of Entry Fee ... £ Special two 9/- ... £ 11-13-60 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ When applied for, 19 When received, 24/11/19

W. Lindale, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE FEB. 3 - 1920 Assigned See Sou 10450



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