

## REPORT ON MACHINERY.

No. 43660.

WFO. 21 MAY. 1924

Date of writing Report 17th May 1924 When handed in at Local Office 17th May 1924 Port of GLASGOW Received at London Office

No. in Survey held at Glasgow Date, First Survey 12th Dec. 1922 Last Survey 16th May 1924  
Reg. Book. 38520 Survey on the STEEL SCREW STEAMER "CABLE ENTERPRISE" (Number of Visits 51)

Master Glasgow Built at Glasgow By whom built A. J. Inglis, Ltd. Tons { Gross 942  
Net 357  
When built 1924

Engines made at Glasgow By whom made do. when made 1924

Boilers made at do. By whom made do. when made 1924

Registered Horse Power 145 Owners Western Telegraph Co. Ltd. Port belonging to London

Nom. Horse Power as per Section 28 145 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inverted cylinder direct acting triple expansion No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 16½" 27" 45" Length of Stroke 33" Revs. per minute 92 Dia. of Screw shaft as per rule 9¾" Material of screw shaft steel  
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 yes If two  
liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 3-6"

Dia. of Tunnel shaft as per rule 8.9" Dia. of Crank shaft journals as per rule 8.9" Dia. of Crank pin 9½" Size of Crank webs 17½" x 6½" Dia. of thrust shaft undated  
collars as fitted 8¾" Dia. of screw 11-3" Pitch of Screw 14-6" No. of Blades 4 State whether moveable no Total surface 49.25 ft.²  
No. of Feed pumps 2 Diameter of ditto 7" Stroke 12" Can one be overhauled while the other is at work yes  
No. of Bilge pumps 2 Diameter of ditto 2½" Stroke 16½" Can one be overhauled while the other is at work yes  
No. of Donkey Engines 2 Sizes of Pumps 6" x 4½" x 6" + 6" x 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 2 @ 2½" + 2 @ 2½" In Holds, &c. 10" + 15" @ 2½"

No. of Bilge Injections One size 6" Connected to condenser, or to circulating pump pump 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 —  
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 abt. level  
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  
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Eng. Rm. top platform

OILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons, Ltd. 2SB.

Total Heating Surface of Boilers 1890 ft.² Is Forced Draft fitted yes No. and Description of Boilers 2-cylindrical 18" Return Tube  
Working Pressure 180 lb./in.² Tested by hydraulic pressure to 320 lb./in.² Date of test 16-8-23 No. of Certificate 16.320  
Can each boiler be worked separately yes Area of fire grate in each boiler 30 ft.² No. and Description of Safety Valves to  
each boiler 2: direct spring Area of each valve 5.94 in.² Pressure to which they are adjusted 185 lb./in.² Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork well clear Mean dia. of boilers 10-6" Length 10-4 ½" Material of shell plates steel  
Thickness 7/8" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams T.R.D.B.S.  
Long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 31/32" Pitch of rivets 6 7/8" Lap of plates or width of butt straps 15 ½"  
Per centages of strength of longitudinal joint 94.3 Working pressure of shell by rules 180 lb. Size of manhole in shell 16" x 12"  
Size of compensating ring 32" x 28" x 1 ½" No. and Description of Furnaces in each boiler 2 corrugated iron Material steel Outside diameter 3-1 ½"  
Length of plain part top 9 1/16" Thickness of plates bottom 9 1/16" Description of longitudinal joint weld No. of strengthening rings 7/8"  
Working pressure of furnace by the rules 220 lb. Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 7/8"  
Pitch of stays to ditto: Sides 8" x 8 ½" Back 9" x 8" Top 7 ½" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187 lb.  
Material of stays steel Area at smallest part 1.73 in.² Area supported by each stay 72 in.² Working pressure by rules 212 lb. End plates in steam space: 2 1/16" F.  
Material steel Thickness 1 1/16" B. Pitch of stays 15 ½" x 15 ½" How are stays secured 2 nuts + Washers B. Working pressure by rules 180 F. Material of stays steel  
Area at smallest part 5.18 in.² Area supported by each stay 240 in.² Working pressure by rules 211 lb. Material of Front plates at bottom steel  
Thickness 13/16" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays P.C.D. = 23" Working pressure of plate by rules 210 lb.  
Diameter of tubes 2 ½" Pitch of tubes 3 ¾" x 3 ¾" Material of tube plates steel Thickness: Front 1 3/16" Back 3/4" Mean pitch of stays 11 ½" x 7 ½"  
Pitch across wide water spaces 1 3/4" x 7 ½" Working pressures by rules 184 lb. Girders to Chamber tops: Material steel Depth and  
thickness of girder at centre 7 ½" x 1 3/8" Length as per rule 2-3 3/8" Distance apart 8" Number and pitch of stays in each 3 @ 7 ½"  
Working pressure by rules 230 lb. 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 —

UPERHEATER. Type None 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 —

002442-002448-0157

© 2021

Lloyd's Register  
Foundation



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2-connecting rod top-end bolts & nuts;

2-connecting rod bottom-end bolts & nuts;

2-main bearing bolts;

1 set—coupling bolts;

1 set—feed & bilge pump valves;

A quantity assorted bolts & nuts: and Iron of various sizes.

1 length crank shaft

1 propeller shaft

1 cast iron propeller:

1 complete set piston packing rings & springs (Backley).

The foregoing is a correct description,

A. & J. INGLIS LIMITED,

Peter Walker, Int. Secy. Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1922 Dec 12, 19 1923 Jan 10-15-22-29 Feb 1 9 12, 19 27 Mar 12 14 19 29 Apr 19 30 May 15-23-24 25 28 Jun 1 8 Jul 11  
During erection on board vessel --- Aug 6 9 16 20 Sep 3 Oct 8 9 Dec 18 1924 Jan 15-23-31 Feb 4 8 14 21 22 28 Mar 3 4 8 Apr 13 7 24 May 13 16  
Total No. of visits 51.

Is the approved plan of main boiler forwarded herewith yes.

" " " donkey " " " none.

Dates of Examination of principal parts—Cylinders { 15-5-23 23-5-23 25-5-23 Slides 23-5-23 Covers 23-5-23 Pistons 23-5-23 Rods 23-5-23

Connecting rods 23-5-23 Crank shaft 20-8-23 Thrust shaft 29-1-23 Tunnel shafts 20-8-23 Screw shaft 20-8-23 Propeller 18-12-23

Stern tube 18-12-23 Steam pipes tested { 21-22-24 3-4-24 Engine and boiler seatings { 28-2-24 Engines holding down bolts 3-3-24

Completion of pumping arrangements 24-4-24 Boilers fixed 28-2-24 Engines tried under steam 24-4-24

Completion of fitting sea connections 31-1-24 Stern tube 31-1-24 Screw shaft and propeller 8-2-24

Main boiler safety valves adjusted 2-4-24 Thickness of adjusting washers P.Bh. 7/16 F. 13/16 A. : St. Bh. 3/8 F. 7/16 A.

Material of Crank shaft steel Identification Mark on Do. LLOYD'S No 1162 J.B. 20-8-23 Material of Thrust shaft steel Identification Mark on Do. LLOYD'S No 1164 J.B. 20-8-23

Material of Tunnel shafts steel Identification Marks on Do. LLOYD'S No 1165 J.B. 20-8-23 Material of Screw shafts steel Identification Marks on Do. LLOYD'S No 1166 J.B. 20-8-23

Material of Steam Pipes solid drawn steel Test pressure 540 lbs./in.<sup>2</sup>

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

Have the requirements of Section 49 of the Rules been complied with yes.

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. These engines & boilers have been

built under special survey in accordance with the Rules & the approved plans. The material & workmanship are good. They have been fitted on board and tried under steam with satisfactory result. The oil fuel burning arrangements have also been fitted in accordance with the latest Rules & the approved plans.

This machinery is eligible, in our opinion, to be classed in the Register Book with Records, L.M.C.-5.24, T.S.-CL; and fitted for oil fuel, 5.24, F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.24. FD. CL. Fitted for oil fuel 5.24. F.P. above 150°F

The amount of Entry Fee ... £ 3 : - :  
Special ... £ 36 : 5/ :  
Donkey Boiler Fee ... £ - : - :  
Travelling Expenses (if any) £ - : - :

When applied for, 20 MAY 1924

When received, 20 MAY 1924

J.D. Boyle, H.B. Forster, J.Y. Barr.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 20 MAY 1924

Assigned + LMC 5.24 FD.

Fitted for oil fuel 5.24 F.P. above 150°F.

CERTIFICATE WRITTEN 21/5/24



© 2021 Lloyd's Register Foundation