

Received at London Office TUE. - 1 FEB. 1916

Date of writing Report 20th January 1916 which handed in at Local Office 10 Port of Copenhagen
 No. in Survey held at Copenhagen Date, First Survey 10th March Last Survey 28th Decr. 1915
 Reg. Book. Splmt. 67. on the Steel Twin S. 4 Mast. S. "Chile" (Oil Engines) (B. W. Yard No. 303). (Number of Plates 76) Gross 5569.74
 Master F. Gne Built at Copenhagen By whom built Akt. Burmeister & Wain Tons Net 3490.40
 Engines made at Copenhagen By whom made Akt. Burmeister & Wain when made 1915.
 Boilers made at Copenhagen By whom made Akt. Burmeister & Wain when made 1915.
 Registered Horse Power 3100 IHP Owners Akt. Det Jøstadske Kompagni Port belonging to Copenhagen
 Nom. Horse Power as per Section 29 568 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines 2 off 4 stroke cycle single acting Diesel engines No. of Cylinders 12 No. of Cranks 12
 Dia. of Cylinders 24¹³/₁₆ 630 mm. Length of Stroke 37¹³/₁₆ 960 mm. Revs. per minute 125 Dia. of Screw shafts 12¹/₂ Material of screw shafts S. A. S. Steel
 Is the screw shafts fitted with a continuous liner the whole length of the stern tubes 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 Out length 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 5' 6"
 Dia. of Tunnel shafts 11⁵/₈ Dia. of Crank shaft journals 38¹/₂ Dia. of Crank pin 38¹/₂ Size of Crank webs 250 x 830 Dia. of thrust shaft under
 collars 12¹/₄ Dia. of screws 12' 0" Pitch of Screws 9' 3" No. of Blades 4 State whether moveable No Total surface 45 sq.
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work Donkey boiler feed pump
 No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work and a feed injector
 No. of Donkey Engines 5 off Sizes of Pumps See following sheet No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 off 3" each and 2 off 3¹/₂" each In Holds, &c. In No. 1 2 & 3 holds forward Eng. space and in No. 4 hold aft Eng. space
 2 off in each 3¹/₂" each In No. 5 hold aft Eng. space 3 off 3¹/₂" each In tunnel well one 3¹/₂" From F.P.T. & A.P.T. in each 2¹/₂" From D.B. tanks as per approved plan.
 No. of Bilge Injections 2 off sizes 4¹/₂" Connected to condenser, or to circulating pumps Is a separate Donkey Suction fitted in Engine room & size ballast pump
 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 Valves except donkey boiler blow off cock
 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 above
 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 no bunkers 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 10/11, 13/11 1915 of Stern Tube 27/10, 27/11 1915 Screw shaft and Propeller 10/12, 23/12, 25/12 1915
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper deck.

BOILERS, &c.—(Letter for record.) Manufacturers of Steel

Total 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
 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
 each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
 Smallest 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 welded or flanged Descrip. of riveting: cir. seams
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
 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
 Pitch across wide water spaces 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 Superheater or Steam chest; how connected to boiler 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

IS A DONKEY BOILER FITTED?

Yes ✓

If so, is a report now forwarded?

Yes!

SPARE GEAR. State the articles supplied:—

As per accompanying list. ✓

The foregoing is a correct description,

AKTIESELSKABET

BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI.

BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI.
Arthur Severin Louis Hennrich

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	10, 12, 14, 15, 22 March, 14, 29 April, 3 May, 13, 7, 9, 14, 16, 23, 25, 29 June, 2, 6, 7, 8, 12, 13, 15, 20, 21, 26, 27, 30 July, 2, 3, 4, 6, 8, 7, 14, 12, 13, 20, 24, 25, 28, 30, 31 August, 1, 2, 5, 6, 7, 10, 15, 16, 20, 21, 22, 23, 24, 27, 27, 30 Sept. 1, 2, 5, 8, 11, 13, 14, 15, 20, 21, 24 Oct. 1, 6, 10, 11, 13, 16, 17, 24.
	During erection on board vessel - - -	1, 3, 6, 10, 13, 14, 15, 17, 20, 21, 23, 24 - 28 Decr. 1915.
	Total No. of visits	96
	Is the approved plan of main boiler forwarded herewith ✓	

Is the approved plan of main boiler forwarded herewith. ✓

Cylinders		Slides		Covers		Pistons		Rods	
Dates of Examination of principal parts—	25/6, 20/7, 30/7, 2/9, 5/9, 15	None	27/6, 13/7, 26/7, 26/7, 30/7, 7/9, 25/6, 27/6, 2/9	2/9, 7/9, 15	5/10, 1/10, 15	2/9, 5/9			
Connecting rods	15/7, 21/7, 8/8, 15/8, 10/3, 14/3, 7/6, 14/7, 7/7, 4/8	3/8, 12/8, 18/8	6/8, 18/8, 20/8, 3/8, 4/9	13/8, 17/8, 25/8	10/12, 2/8				
Crank shafts	3/9, 21/9, 26/9, 15	Thrust shafts 24/8, 1/9, 15	Tunnel shafts 15/9, 20/9, 24/15	Screw shafts 30/9, 5/10, 14/15	Propellers				
Stern tube	18/8, 3/8, 15	Steam pipes tested	No.	Engines and boiler seatings	10/11, 13/11, 15	Engines holding down bolts	25/11, 3/12, 6/12		
						Working condition	20/9, 21/9, 28/9		

Is an installation fitted for burning oil fuel yes for the donkey boiler ✓ 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 Yes. If so, state name of vessel Panama " 23 in Spent. " 47
Australien " 46 " " " 48
Columbia " 46 " " " 48

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

In accordance with the Rules for Special Survey we have examined the material and workmanship from the commencement until the final test of the machinery under full power working condition and found it good in every respect.

The dimensions are as specified and in accordance with the approved plans and London letters E dated 19/11 14/12 9/12¹⁵ and 29/1 1916.

The starting air receivers have been constructed in accordance with the approved plan, the plates from The Glasgow Iron & Steel Co. Ltd. Wishaw, - rivets from Ruze Bros. Copenhagen made of bars from Steel Company of Scotland Lim. Glasgow, - tested as required by the Rules as per test notes produced, - and the receivers have been tested in my presence, by hydraulic pressure to 39.0 atm. and found good and tight.

On the trial trip the main engines and the whole auxiliary machinery have been tested under full power working condition and found to work satisfactorily, the manoeuvring of the main engines tested under working condition and found satisfactorily.

Recommend the vessel's machinery to have notation of \star LMC-12/15.

The amount of Entry Fee ...	Rs. 51 : 81 :	When applied for,
Special ...	Rs. 833 : 87 :	12 : 1 19 16
Donkey Boiler Fee ...	Rs. 36 : 27 :	When received,
Electric light Travelling Expenses (if any) \$	172 : 70 :	18 : 1 12 16

A. C. Dubuch. & Co. Libros
Formerly Shipwrecked Libros Register of British & Foreign Shipping

Committee's Minute FRI. FEB. 4-1916

Assigned

+ Lm 6.12.13
oil engine

6.
MACHINERY CERTIFICATE:
WRITTEN.



Lloyd's Register
Foundation

Copenhagen

Continuation of Report No. 4880 dated 20th January 16 on the

Steel Twin Sc. 4 Mast. Fr. "Chile" of Copenhagen

Burmeister & Wain's Yard No. 303.

The auxiliary machinery comprising:-

One 150 Tons rotary ballast pump.

Two 85 Tons centrifugal cooling water pumps (Ries-Ro Turbo)

Two pumps, each with 3 separate plungers, - one being for bilge purposes, - one for discharging the cooling water from main pistons and one for sanitary purposes. Diam. of plungers 6 1/2". Stroke 9".

Revolutions 100. Capacity 20 Tons.

Four 15 Tons rotary oil pumps for the forced lubrication.

One oil fuel pump for the daily service oil tank. Diam. of plunger 6 1/2". Stroke 8". Revolutions 60. Capacity 10 Tons.

One vertical two stage auxiliary air compressor.

all
driven by
electric
motors.

Three - 2 cylinder four stroke cycle single acting auxiliary Diesel oil engines, placed on port side of the engine room and working three compound wound dynamos of 60 K.W. - 273 Amps. 220 Volts, each supplying electricity for motive power for:-

One 15 H.K. shunt motor for working the ballast pump.

Two 15 " " " " the two centrifugal cooling water pumps.

Two 7.5 " " " " two bilge and sanitary pumps.

Two 10 " " " " 4 rotary oil pumps for the forced lubrication.

One 15 " " " " the oil fuel pump to the daily service oil tanks.

One 90 HK compound motor for working the auxiliary air compressor.

Two 6 " " " " the turning gear.

One 2 " " shunt motor " " the turning lathe and drilling machine.

One 3 " " shunt motor " " the ballast pump to the fore peak tank.

One 58. " " compound motor " " the windlass.

One 24 " " shunt motor " " the steering gear.

Four 21 " " and ten 12.5 HK series motors for working the cargo winches.

And electricity for the lighting purposes with the voltage reduced from 220 to 110 Volts after passing the transformer.

A two stage spare air compressor is fitted in the engine room and being worked by a directly coupled steam engine.

Manufacturers:

AKTIESELSKABET
BURMEISTER & WAIN'S MASKIN- OG SKIBBYGGERI.

Arthur Sørensen & Søn

A. O. J. Jørgensen, Skibsfors.

SURVEYOR TO LLOYD'S
REGISTER OF SHIPPING