

Received at London Office MON. 28 FEB. 1921

Date of writing Report 22nd Feb. 1921 When handed in at Local Office 19

Port of Copenhagen

No. in Survey held at Copenhagen & Kalundborg.

Date, First Survey 7th Novr. 1919. Last Survey 11th February 1921.

Reg. Book.

(Number of Visits 27.

80500 on the Steel S.S. "Moland" (Yard No. 10).

Gross 1377.12

Net 786.31

Master Guttan Pedersen Built at Kalundborg. By whom built Akt. Kalundborg Skibsverft.

When built 1920 - 21.

Engines made at Copenhagen By whom made Akt. Smith, Mygind & Hüttenmeier

when made 1919 - 21.

Boilers made at Copenhagen By whom made Akt. Smith, Mygind & Hüttenmeier

when made 1919 - 21.

Registered Horse Power 120

Owners Aktieselskabet Rundtur (Olaf Christensen)

Port belonging to Arendal - Norway.

Nom. Horse Power as per Section 28 120

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Vertical Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 14 1/4" x 25 5/8" x 42 1/8" Length of Stroke 27 5/8" Revs. per minute 100 Dia. of Screw shaft as per rule 7 65" Material of S.M.I. Steel.

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tight in the propeller boss fitted. 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 ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 1100 3/4" = 43.3"

Dia. of Tunnel shaft as per rule 8.06" Dia. of Crank shaft journals as per rule 8.46" Dia. of Crank pin 8.66" Size of Crank webs 16.54" x 5.9" Dia. of thrust shaft under collars 8.66" Dia. of screw 11 5/8" Pitch of Screw 10 3/4" No. of Blades 4 State whether moveable No. Total surface 3.88 sq. m. = 4.76 sq. ft.

No. of Feed pumps 2 off Diameter of ditto 3.94" Stroke 8.27" Can one be overhauled while the other is at work Yes, and a feed injector fitted to the main boilers.

No. of Bilge pumps 2 off Diameter of ditto 3.15" Stroke 14.76" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines 2 off (duplex) Sizes of Pumps Donkey engine pump 150 3/4" x 100 3/4" x 150 3/4" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2 on Starboard & 1 on Port side each 2 1/2" diam. In Holds, &c. In forehold 2 off 2 1/2" diam. In after hold 2 off 2 1/2" diam.

In funnel well one 2 1/2" diam. In fore peak tank one 3" diam. In after peak tank one 2 1/2" diam. In double bottom tanks 3" & 2 1/2" diam. as per approved plan.

No. of Bilge Injections one sizes 4 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes, 2 1/2" diam.

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 the 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 Yes.

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 upper deck.

BOILERS, &c.—(Letter for record S.)

Manufacturers of Steel Furnaces: John Spence & Sons, Ltd. Newburn Steel Works, Newcastle on Tyne.

Total Heating Surface of Boilers 2028 sq. ft. Is Forced Draft fitted No. No. and Description of Boilers 2 off Single Ended, Scotch Type.

Working Pressure 185 lbs. per sq. in. Tested by hydraulic pressure to 370 lbs. per sq. in. Date of test 21st June 1920 No. of Certificate 408 & 409.

Can each boiler be worked separately Yes. Area of fire grate in each boiler 33.7 sq. ft. No. and Description of Safety Valves to each boiler 2 off Direct spring loaded Area of each valve 3.976 sq. in. Pressure to which they are adjusted 185 lbs. per sq. in. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 14" Mean dia. of boilers 32.80 3/4" Length 31.26 3/4" Material of shell plates S.M. Steel.

Thickness 24 3/4" Range of tensile strength 28-32 Tons Are the shell plates welded or flanged Riveted. Descrip. of riveting: cir. seams double riveted.

long. seams triple riveted Diameter of rivet holes in long. seams 1 1/8" = 26.97 3/4" Pitch of rivets 165 3/4" Lap of plates or width of butt straps 374 3/4" 3/4"

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules 186 lbs. Size of manhole in shell 40.6 x 30.5 3/4" 3/4"

Size of compensating ring 72 3/4" x 82 3/4" No. and Description of Furnaces in each boiler 2 off corrugated Material S.M. Steel Outside diameter 1100 3/4" 3/4"

Length of plain part top Thickness of plates 14 3/4" Description of longitudinal joint welded. No. of strengthening rings ✓

Working pressure of furnace by the rules 197 lbs. Combustion chamber plates: Material S.M. Steel Thickness: Sides 18 3/4" Back 15 3/4" Top 18 3/4" Bottom 18 3/4" 3/4"

Pitch of stays to ditto: Sides 200 x 200 3/4" Back 200 x 180 3/4" Top 200 x 206 3/4" If stays are fitted with nuts or riveted heads riveted outside except Working pressure by rules Top = 170 "

Material of stays S.M. Steel Area at smallest part 2.5 sq. in. Area supported by each stay 62.4 sq. in. Working pressure by rules 192 lbs. End plates in steam space: 220 lbs.

Material S.M. Steel Thickness 23 3/4" Pitch of stays 40 x 30 3/4" How are stays secured riveted washers Working pressure by rules 190 lbs. Material of stays S.M. Steel.

Area at smallest part 4.4 sq. in. Area supported by each stay 216 sq. in. Working pressure by rules 212 lbs. Material of Front plates at bottom S.M. Steel.

Thickness 23 3/4" Material of Lower back plate S.M. Steel. Thickness 23 3/4" Greatest pitch of stays 350 x 200 3/4" Working pressure of plate by rules 222 lbs.

Diameter of tubes 83 3/4" Pitch of tubes 110 x 110 3/4" Material of tube plates S.M. Steel Thickness: Front 23 3/4" Back 19 3/4" Mean pitch of stays 220 3/4" 3/4"

Pitch across wide water spaces 350 3/4" Working pressures by rules 185 3/4" Girders to Chamber tops: Material S.M. Steel Depth and thickness of girder at centre 210 3/4" x 2 1/8" Length as per rule 600 3/4" Distance apart 206 3/4" Number and pitch of stays in each 2 off - 270 3/4" 3/4"

Working pressure by rules 207 lbs. 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 Schmidt's Patent

Date of Approval of Plan 11th August 1920

Tested by Hydraulic Pressure to 555 lbs. per sq. in.

Date of Test 13th September 1920

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

Diameter of Safety Valve 30 3/4" 3/4"

Pressure to which each is adjusted 185 lbs. per sq. in. Is Easing Gear fitted Yes.

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— One cast iron propeller. One set of coupling bolts and nuts, 2 main bearing bolts and nuts. 2 connecting rod bottom end bolts and nuts. 2 connecting rod top end bolts and nuts. 1 set of Ramsbottom packing rings for H.P. & M.P. pistons, 1/2 set of springs for L.P. piston. 10 studs and nuts for cylinder & slide valve covers, - 10 piston packing screws, 1 air pump rod, - 2 air pump and 2 circulating pump valves, - 2 feed and 2 bilge pump valves with seats, - 2 valves for the feed check valves on boilers. 10 Condenser tubes with 20 screw ferrules. - 2 springs for boiler safety valves. 8 boiler tubes. 12 water gauge glasses. 1 set of fire bars. 1 valve with seat for the ballast pump and one do. for the donkey engine pump. 2 valves steam reduction valves, 6 boiler tube stoppers. A Quantity of assorted bolts and nuts. Iron & plates of various sizes. -

The foregoing is a correct description,

Aktieselskabet
SMITH MYGIND & HÖTTEMEIER

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 7, 13 & 28 Nov. 10 & 13 Dec. 1919 14 Jan. 6 Feb. 19 March, 11, 12 & 21 May, 17, 21 & 29 June 25 Aug. 16, 20 & 22 Sept. 1920
During erection on board vessel - - 11 & 18 Sept. 20 Oct. 20 Nov. 1920 11, 15, 20, 21, 25 Jan. 1921.
Total No. of visits { Is the approved plan of main boiler forwarded herewith yes. ✓

Dates of Examination of principal parts—Cylinders 7/11, 13/11, 28/11, 10/12, 13/12 1919. Slides 1/2, 11/11, 6/2 20 Covers 7/11, 28/11, 1919. Pistons 1/11, 4/2, 11/5 20 Rods 25/18 7/11, 13/11, 12/12. Connecting rods 12/11, 12/12, 19 Crank shaft 7/11, 28/11, 19 13/12 Thrust shaft 13/12, 29/6 20 Tunnel shafts 21/5, 29/7, 20/7 20. Screw shaft 13/11, 4/2, 11/5 20 Propeller 13/12, 20/12, 1920. Stern tube 19/5, 12/5, 11/7 20 Steam pipes tested 11/11 Jan. 1921. Engine and boiler seatings 11/11 Sept. 1920 Engines holding down bolts 20/11 Nov. 1920. Completion of pumping arrangements 20/11 Jan. 1921. Boilers fixed 20/11 Nov. 1920. Engines tried under steam 20/11 & 21/11 Jan. 1921. Completion of fitting sea connections 18/11 Sept. 1920. Stern tube 18/11 Sept. 1920. Screw shaft and propeller 15/11 Jan. 1921. Main boiler safety valves adjusted 20/11 January 1921 Thickness of adjusting washers No adjusting washers - check nuts fitted. Material of Crank shaft S.M. Steel Identification Mark on Do. 10-18 C.K. Material of Thrust shaft S.M. Steel. Identification Mark on Do. 22-9-20 AF. Material of Tunnel shafts S.M. Steel. Identification Marks on Do. 22-9-20 AF. Material of Screw shafts S.M. Steel. Identification Marks on Do. 22-9-20 AF. Material of Steam Pipes S.M. Steel (Seamless drawn) Test pressure 555 lbs. per square inch.

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 S.S. "Agrodon", Gen. Rpt. No. 5945.

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 the workmanship from the commencement of construction until the final trial under steam and found it good in every respect.

The dimensions are as specified and in accordance with the Rules, the approved plans and the requirements contained in letters E dated 2nd March, 9th Sept. 1918, 3rd July 1919, 11th Aug. & 27th Octbr. 1920, - and the material used in the construction has been tested as required by the Rules as per certificates produced. -

On the trial trip the engines and boilers worked satisfactorily. -

It is submitted that
this vessel is eligible for
THE LLOYD'S REGISTER + LMC. 2.21

Recl
3/3/21

RR

Recommend the vessel's machinery to have notation of **LMC - 2.21**

The amount of Entry Fee ... £. 39 : 40 :
Special Electric Light Inst. ... £. 354 : 60 :
Donkey Boiler Fee ... £. 98 : 50 :
Travelling Expenses (if any) £. 494 : 50 :
When applied for, 1. 2. 1921.
When received, 29. 3. 1921.

A. D. F. J. J. J.
Engineer/Surveyor to Lloyd's Register of Shipping.

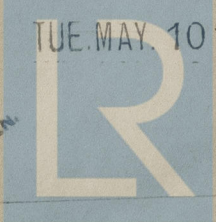
Committee's Minute

TUE MAR 22 1921

Assigned

+ LMC 2.21

TUE. MAY. 10 1921



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Lloyd's Register
Foundation