

Rpt. 4.

REPORT ON MACHINERY.

No. 73.

Received at London Office

Date of writing Report 31st May 1919 When handed in at Local Office 31st May 1919 Port of Malmö.

THU. JUN. 12. 1919

No. in Survey held at Malmö.

Date, First Survey 15th October 1918 Last Survey 3rd May 1919.

Reg. Book.

(Number of Visits 31

on the Steel S. S. "Ellwiron"

Gross 1326.82

Net 770.05

Master G. Skjöldebrand Built at Malmö

By whom built Kockums Mek. Verkstads A.B. When built 1919-5 mo.

Engines made at Malmö.

By whom made Kockums Mek. Verkstads Aktief. when made 1919

Boilers made at Malmö

By whom made Kockums Mek. Verkstads Aktief. when made 1919

Registered Horse Power

Owners Ljusne - Wocna Aktiefbolag Port belonging to Ljusne

Nom. Horse Power as per Section 28 157

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted yes.

ENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 18 1/8", 28 3/4", 48 3/16" Length of Stroke 3 1/2" Revs. per minute 84

Dia. of Screw shaft 10.92" 10 1/4" Material of Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners fitted Is the after end of the liner made water tight in the propeller boss

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

Dia. of Tunnel shaft 8 3/8" 8.92" Dia. of Crank shaft journals 9 3/8" 9.38" Dia. of Crank pin 9 3/4" Size of Crank webs 17 3/4" x 7 1/8" Dia. of thrust shaft under collars 9 3/4" Dia. of screw 12 1/10" Pitch of Screw 11 9 3/4" No. of Blades 4 State whether maceable No. Total surface 48 sq'

No. of Feed pumps Two Diameter of ditto 3 1/16" Stroke 14 3/16" Can one be overhauled while the other is at work yes.

No. of Bilge pumps Two Diameter of ditto 3 1/16" Stroke 14 3/16" Can one be overhauled while the other is at work yes.

No. of Donkey Engines Two Duplex Sizes of Pumps 5 7/8" x 3 5/8" x 5 7/8" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four - 2 1/2". Tunnel well, 1 - 2 1/2" In Holds, &c. Two - 3" in fore hold. Two - 2 1/2" in after hold.

No. of Bilge Injections 1 size 6" Connected to condenser, or to circulating pump

Are all the bilge suction pipes fitted with roses

Are all connections with the sea direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

What pipes are carried through the bunkers

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

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

Is the Screw Shaft Tunnel watertight

OILERS, &c.—(Letter for record S) Manufacturers of Steel Rheinische Stahlwerke, Abt. Duisburg, Strömsnäs, Jernverks A.B. Segerfors.

Total Heating Surface of Boilers 2546 sq' Is Forced Draft fitted No. No. and Description of Boilers Two single ended multitubular

Working Pressure 85 lbs per sq' Tested by hydraulic pressure to 370 lbs per sq' Date of test 25/3, 28/3 1919 No. of Certificate 647.

Can each boiler be worked separately

Each boiler Two spring loaded Area of each valve 7 sq' Pressure to which they are adjusted 190 lbs per sq' Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 36 5/8" Length 3250" Material of shell plates Steel

Thickness 26 mm Range of tensile strength 44-50 kg per mm² Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double lap.

ong. seams of equal width Diameter of rivet holes in long. seams 27 mm Pitch of rivets 18 1/2" Lap of plates or width of butt straps 400 mm

Per centages of strength of longitudinal joint rivets 89 plate 85 Working pressure of shell by rules 185 lbs per sq' Size of manhole in shell 490 mm x 390 mm

Size of compensating ring 720 x 26 mm No. and Description of Furnaces in each boiler 2 Morrison's Material Steel Outside diameter 1160 mm

Length of plain part top Thickness of plates bottom 15 1/2" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material steel Thickness: Sides 15 mm Back 15 mm Top 15 mm Bottom 17 mm

Pitch of stays to ditto: Sides 2 1/2 x 195 mm Back 2 1/2 x 195 mm Top 2 1/2 x 208 mm If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 187 lbs

Material of stays steel Area at smallest part 1504 sq' Area supported by each stay 630 sq' Working pressure by rules 189 lbs End plates in steam space:

Material steel Thickness 25 mm Pitch of stays 4 1/6 x 380 mm How are stays secured washers outside plates Working pressure by rules 186.5 lbs Material of stays steel

Area at smallest part 5.45 sq' Area supported by each stay 246 sq' Working pressure by rules 230 lbs Material of Front plates at bottom steel

Thickness 25 mm Material of Lower back plate steel Thickness 25 mm Greatest pitch of stays 340 x 195 mm Working pressure of plate by rules 281 lbs

Diameter of tubes 3 1/2" Pitch of tubes 12 1/2 x 120 mm Material of tube plates steel Thickness: Front 25 mm Back 20 mm Mean pitch of stays as per plan

Pitch across wide water spaces 370 mm Working pressures by rules 187 lbs per sq' Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 2 (176 x 20 mm) Length as per rule 685 mm Distance apart 208 mm Number and pitch of stays in each Two, 200 mm

Working pressure by rules 191 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 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

1110-220200-311200

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 2 connecting rod bottom end bolts and nuts, 2 connecting top end bolts with nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, 1 set of L.P. piston springs, 1 propeller, piston rings and air pump rod, a number of boiler and condensor tubes. Bolts, nuts and iron of various sizes.

The foregoing is a correct description,

KOCKUMS MEKANISKA VERKSTADS
AKTIE-BOLAG.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 10/4, 1, 4, 9, 10, 11, 12/9, 2, 10, 15, 16/10, 6/12 1918, 20/1, 20, 27, 28/2, 4, 17, 24, 25, 25/2, 28, 29, 31/3, 10, 17, 23, 29, 30/4, 2, 3/5 1919
During erection on board vessel --
Total No. of visits 31.
Is the approved plan of main boiler forwarded herewith (a copy of) yes.

Dates of Examination of principal parts—Cylinders 10/4, 11/9, 12/9, 16/10, 20/2, 31/3 1919 Slides 20/2, 31/3 1919 Covers 20/2, 31/3 1919 Pistons 20/2, 31/3 1919 Rods 20/2, 31/3 1919
Connecting rods 20/2, 31/3 1919 Crank shaft 21/5, 10, 12/18, 13/19 Thrust shaft 6/12 18 Tunnel shafts 6/12 18 Screw shaft 6/12 18 Propeller 27/2 19
Stern tube 4/3 19 Steam pipes tested 10/4 19 Engine and boiler seatings 10/4 19 Engines holding down bolts 10/4 19
Completion of pumping arrangements 30/4 1919 Boilers fixed 23/4 1919 Engines tried under steam 3/5 1919
Completion of fitting sea connections 24/3 1919 Stern tube 20/2 1919 Screw shaft and propeller 24/3 1919.

Main boiler safety valves adjusted 29th April 1919 Thickness of adjusting washers Double nuts fitted.
Material of Crank shaft Steel Identification Mark on Do. 137, 38, 39 Lloyd's Nos. 6.12.18 G.W.J. Material of Thrust shaft Steel Identification Mark on Do. 6.12.18 G.
Material of Tunnel shafts Steel Identification Marks on Do. 41, 42, 43 Lloyd's Nos. 6.12.18 G.W.J. Material of Screw shafts Steel Identification Marks on Do. 6.12.18 G.
Material of Steam Pipes Steel Test pressure 560 lbs per sq. in.

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 ss. "Grim", Yard No. 128.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boilers of this vessel have been constructed under the usual conditions of special survey in accordance with the approved plans. Forgings and castings examined and tested as per rule. Engines tried under steam and found working satisfactorily.

The machinery of this vessel is eligible in my opinion to have the notation of **LMC 5.19** in the Register Book. Boiler pressure 185 lbs per square inch.

Enclosed please find copies of the Boiler test certificates issued in this case.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 5.19.

The amount of Entry Fee ... £K. 36:40 : When applied for,
Special Forging ... £K. 642:92 : 10th May 1919
Donkey Boiler Fee ... £K. 120:00 : When received,
Travelling Expenses (if any) £ : 20th May 1919.

Committee's Minute FRI. 20 JUN. 1919

Assigned

FRI. SEP. 3 1920

Rpt. 13.

REPO

Port of Mo

No. in on the Reg. Book

Built at

Owners Ljusne

Yard No. 134

DESCRIPTION OF D

Stran

Capacity of Dynamo

Where is Dynamo fixed

Position of Main Switch

Positions of auxiliary

of 4 groups

groups in

If fuses are fitted on

circuits yes

If vessel is wired on the

Are the fuses of non-oz

Are all fuses fitted in e

are permanent instr

Are all switches and fus

Total number of lights p

A 19

B 27

C 10

D 5

E 41

2 Mast head light

2 Side light

4

If arc lights, what protecti

Where are the switches co

DESCRIPTION OF CABLE

Main cable carrying

Branch cables carrying

Branch cables carrying

Leads to lamps carrying

Cargo light cables carrying 2

DESCRIPTION OF INSUL

Vulcaniz

where required

Joints in cables, how made, in

Are all the joints of cables th

positions, none being ma

Are there any joints in or bro

How are the cables led throu

by iron tubes



© 2020

Lloyd's Register
Foundation