

pt. 4a.

REPORT ON MACHINERY.

No. 1991

Date of writing Report 12 Nov 1920 When handed in at Local Office 19 Port of Stockholm

No. in Survey held at Sattsjö-färda Stockholm list Date, First Survey 15 Nov 1918 Last Survey 26 Oct 1920

Reg. Book. on the (Number of Visits 13)

Tons Gross Net

Master Built at Landskrona By whom built Kettebogat Öresundsvävet & 18 When built 1920

Engines made at Stockholm By whom made A.B. de Laval Angturbin when made 1920

Boilers made at By whom made when made

Registered Horse Power Owners 1st Översjöiske Compagnie Port belonging to Copenhagen

Shaft Horse Power at Full Power 2000 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

TURBINE ENGINES, &c.—Description of Engines 2 de Laval Geared Steam Turbines No. of Turbines Two

Diameter of Rotor Shaft Journals, H.P. 110 mm L.P. 110 mm Diameter of Pinion Shafts First Gears LP 90 mm Second gears 200 mm

Diameter of Journals First gears 90 mm Distance between Centres of Bearings First gears 870 mm Second gears 1105 mm Diameter of Pitch Circle First pinions HP 101.036 mm Second pinions 249.863 mm

Diameter of Wheel Shaft Second gears 150-200 mm Distance between Centres of Bearings First gears 1085 mm Second gears 1160 mm Diameter of Pitch Circle of Wheel First gears 933.576 mm Second gears 1629.54 mm

Width of Face First gear two 265 mm Diameter of Thrust Shaft under Collars 250 mm as per rule

No. of Screw Shafts Diameter of same as fitted Diameter of Propeller as fitted

No. of Blades State whether Moveable Total Surface Diameter of Rotor Blade rings H.P. 730 mm L.P. 900 mm Astern 850 mm

Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine HP 4520 LP 4035 Propeller 75

RTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION	24 mm	757 mm	1	38 mm	861 mm	1	HP 1st exp. 10 mm	699 mm	1
"	15 "	748 "	1	55 "	898 "	1	7th L.P. 1st exp. 78.68 mm	932 to 940 mm	1
"	18 "	751 "	1	85 "	949 "	1	" 2nd exp. 112 to 120 mm	966 to 974 mm	1
"	24 "	757 "	1	110 "	994 "	1			
"	33 "	766 "	1	135 "	1039 "	1			
"									
"									
"									
"									

and size of Feed pumps

and size of Bilge pumps

and size of Bilge suction in Engine Room

In Holds, &c.

of 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

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

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

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

at pipes are carried through the bunks 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

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

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

Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

ng Pressure Tested by hydraulic pressure to Date of test No. of Certificate

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

ler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

t distance between boilers or uptakes and bunks or woodwork Mean dia. of boilers Length Material of shell plates

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

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

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

plates plates

mpensating ring No. and Description of Furnaces in each Boiler Material Outside diameter

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

bottom bottom

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

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

rial of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays

rial Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

eter at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules

tness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

refer of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

ress of girder at centre Length as per rule Distance apart Number and pitch of stays in each

ing pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter

ness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets

ing pressure of shell by rules Crown plates: Thickness How stayed

SUPERHEATER. Type

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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— In accordance with the Standard List of the de Laval Turbine Works, which has been approved by Owners. The spare gear will be inspected when the machinery is being fitted in ship.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 15.2/11 1918 2 1/2 27/7 8/9 7.9/10 11/11 18/12 1919 28/1 7.13/9 26/10 1920
During erection on board vessel ---
Total No. of visits 13
Is the approved plan of main boiler forwarded herewith
" " " donkey " " " "
Dates of Examination of principal parts—Casings 7/10 11/11 1919 Turbine fixed Rotor 15.2/11 18 7/9 20 Blading 7/9 20 Gearing 7/9 20
Rotor shaft 21/2 19 Thrust shaft 28.7.19 Tunnel shafts ✓ Screw shaft ✓ Propeller ✓
Stern tube ✓ Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓
Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam 27.8.1920
Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓
Material and tensile strength of Rotor shaft HP S.M. Steel 646 kg/cm² Identification Mark on Do. HP LLOYD'S 21.2.1920
Material and tensile strength of Pinion shaft HP S.M. Steel 646 kg/cm² Identification Mark on Do. HP LLOYD'S 21.2.1920
Materials of Wheel shafts (are the same as second pinion shafts) Identification Mark on Do. HP LLOYD'S 21.2.1920
Material of Tunnel shafts Identification Marks on Do. HP LLOYD'S 21.2.1920
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 a duplicate of a previous case NO If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. These steam turbines have been constructed in special survey in accordance with the Society's Rules and as approved in correspondence (see Secretary's E. dated 18 Oct. 14th Nov. and 13th Dec. 1918). The materials of the shafting are Siemens Martin Steel and Cromwell electro-steel, tested and found to agree with the approved specifications of Material. The condensers have been tested with water and found tight. The workmanship is good. The machinery has been tested in shop and found to work well. I am of opinion, that this machinery is eligible to be classed as soon as it has been fitted in ships in accordance with the Society's Rules for

*LMC

The amount of Entry Fee ... £ : :
Special survey in shop only £ 75 : 0 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 6 : 16 :
Total £ 81 : 16 : 6

When applied for,

12 Nov. 1920

When received,

19

Committee's Minute FRI. 4 MAR. 1921

Assigned



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Lloyd's Register Foundation

Engineer Surveyor to Lloyd's Register of Shipping.
assisted by Mr. T. J. Anderson

A. Bakson