

Received at London Office JUL 23 1918

Date of writing Report 19 When handed in at Local Office 19 Port of Stockholm  
No. in Survey held at Finspong and Vesterås, Stockh. Date, First Survey 16 Nov. 1916 Last Survey 9 July 1918  
Reg. Book. Stockh. Distr. (Number of Visits 46)  
on the (Osaka Iron Works' Building no. 919?) Gross \_\_\_\_\_

Master \_\_\_\_\_ Built at Osaka, Japan By whom built Osaka Iron Works no. 919<sup>2</sup> When built \_\_\_\_\_  
Engines made at Finspong By whom made Svenska Turbinfabriks A.B. Ljungström when made 1918  
Boilers made at Osaka By whom made Osaka Iron Works when made ✓  
Registered Horse Power ✓ Owners ✓ Port belonging to ✓  
Shaft Horse Power at Full Power 2550 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_  
if 1 S.H.P.-75 mkg/second.

TURBINE ENGINES, &c.—Description of Engines		STAL TURBOELECTRIC machinery		No. of Turbines	
turbogenerators: Diam. of journals: turbine side 110 m/m Generator side 80 m/m. Distance between bearings: 1258 m/m.					
Diameter of Motor Shaft Journals, <del>xxxx</del> motor side 285 m/m	Diameter of Pinion Shaft	294 m/m			
Diameter of Journals end journal 230	Distance between Centres of Bearings	1050 m/m	Diameter of Pitch Circle	316.35 m/m.	
Diameter of Wheel Shaft 360 m/m	Distance between Centres of Bearings	1080 m/m	Diameter of Pitch Circle of Wheel	2335.4 m/m	
			125 m/m		
Width of Faces <del>xxxx</del> two x 300 m/m	Diameter of <del>xxxx</del> Shaft <del>xxxx</del> for ball thrust bearing		Diameter of Tunnel Shaft		as per rule
Diameter of <del>xxxx</del> after part of wheelshaft 365 m/m					as fitted
Shafts 1	Diameter of same		Diameter of Propeller		Pitch of Propeller

State whether Moveable \_\_\_\_\_ Total Surface \_\_\_\_\_ Diameter of Rotor Drum, H.P. \_\_\_\_\_ L.P. \_\_\_\_\_ Astern \_\_\_\_\_  
 Bottom of Groove, H.P. \_\_\_\_\_ L.P. \_\_\_\_\_ Astern \_\_\_\_\_ Revs. per Minute at Full Power, Turbine **3600** Propeller **80.**  
 Motors **590**

**LARS OF BLADING.** See plan T-43295

[illegible]

of Feed pumps	two electrically driven Z-pumps of de Laval's make Capacity	180	"	"	250 min. litres at 3150 rev
of Bilge pumps	" " "				2850
of Bilge suction in Engine Room				Diameter of pump wheel	175 m/m.

In Holds, &c.

jections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate Donkey Suction fitted in Engine Room & size \_\_\_\_\_  
ge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_  
ctions with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
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 \_\_\_\_\_  
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 \_\_\_\_\_  
re carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_  
Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_  
Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

S, & C.—(Letter for record _____) Manufacturers of Steel		
ting Surface of Boilers	Is Forced Draft fitted	No. and Description of Boilers
Pressure	Tested by hydraulic pressure to	Date of test
ler be worked separately	Area of fire grate in each boiler	No. of Certificate
	Area of each valve	Pressure to which they are adjusted
Distance between boilers or uptakes and bunkers or woodwork	Mean dia. of boilers	Length
	Range of tensile strength	Material of shell plates
	Are the shell plates welded or flanged	Descrip. of riveting: cir. seams
	Diameter of rivet holes in long. seams	Pitch of rivets
		Lap of plates or width of butt straps

s of strength of longitudinal joint		rivets		Working pressure of shell by rules		Size of manhole in shell	
plates							
Compensating ring		No. and Description of Furnaces in each Boiler		Material		Outside diameter	
top		crown		Description of longitudinal joint		No. of strengthening rings	
bottom		bottom					
Pressure of furnace by the rules		Combustion chamber plates: Material		Thickness: Sides		Back	
Top		Top		Bottom			
Stays to ditto: Sides		Back		Top		If stays are fitted with nuts or riveted heads	
Working pressure by rules							
Stays		Diameter at smallest part		Area supported by each stay		Working pressure by rules	
End plates in steam space							
Thickness		Pitch of stays		How are stays secured		Working pressure by rules	
Material of stays							
At smallest part		Area supported by each stay		Working pressure by rules		Material of Front plates at bottom	

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
Pitch across widdle 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	Steam dome: description of joint to shell	% of strength of joint	Diameter	
Thickness of shell plates	Material	Description of longitudinal joint	Diameter of rivet holes	Pitch of rivets
Working pressure of shell by rules	Crown plates: Thickness	How stayed		

W1320-0217



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. ~~See to specification~~ for turbo-electric machinery, see enclosed specification.

and some additional spare gear, recommended by Mr. T. Björnbom, Representative of the Electric Department of the Central and North of Sweden Steam Users' Association.

The foregoing is a correct description,

SVENSKA TURBINFABRIKS  
AKTIEBOLAGET LINGSTROM

Manufacturer.

*Per. Jon Rong.*

Dates of Survey while building  
During progress of work in shops --  
During erection on board vessel ---  
Total No. of visits \_\_\_\_\_

Is the approved plan of main boiler forwarded herewith \_\_\_\_\_

Dates of Examination of principal parts—Casings *4 Sept. 17, 15 March 18* Turbine Discs " " donkey " " "  
Turbines *8 Aug. & 26 Oct. 18* Rotors *4 Sept. 1917* Blading *21 & 22 Nov. 17* Gearing *5 June & 8 July*  
Rotor shafts *5 Nov. 17, 12 & 13 July 18* Thrust shaft *8 & 9 July 1918* 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 \_\_\_\_\_

Main boiler safety valves adjusted \_\_\_\_\_ Thickness of adjusting washers \_\_\_\_\_

Material and tensile strength of Rotor shaft *Turbine Chrome Nickel Steel 103 kg. m<sup>2</sup>* Identification Mark on Do. *No. 1590 Skm 31.5*

Material and tensile strength of Pinion shaft *Chrome Nickel Steel* Identification Mark on Do. *No. 1592 Skm 31.5*

Material of Wheel shaft *High tens. Steel* Identification Mark on Do. *No. 1387* Material of Thrust shaft *S.M. Steel* Identification Mark on Do. *A*

Material of Tunnel shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_

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. *This turboelectric machinery has been constructed under special survey in accordance with the Society's Rules and as approved in correspondence. The materials of the shafting are Siemens Martin Steel and Chrome Nickel Steel, tested by the undersigned and found to agree with the approved specifications of materials. The workmanship is good.*

*The electric parts have been tried in shop with assistance of the electric department of the Central and North of Sweden Steam Users' Association, and their report has been approved in Secret Letter E of the 1<sup>st</sup> May 1918. The machinery has been tried in shop up to 860 H.P., on each turbine 1720 H.P. for the whole machinery, no higher effect being attainable, due to inferiority of the available boiler fuel. — I am of opinion, that this machinery merits to be classed as soon as it has been fitted and, with boilers etc., successfully tried in ship to its full effect of 2000 H.P. to the satisfaction of the Society's Engineer Surveyors.*

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for,  
Special ... £ 51 : 18 : 0 10 July 1918  
Donkey Boiler Fee ... £ : : : When received,  
Travelling Expenses (if any) £ 58 : 3 : 0 Sep. 20 1918  
Total £ 113 : 1 : 0

Committee's Minute

Assigned

FRI. 5 FEB 1926

*See Kob 5051*

*W. Bakson*

Engineer Surveyor to Lloyd's Register of Shipping.

Assisted by Mr. John Kinnaman



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Foundation