

## REPORT ON MACHINERY.

No. 1994a

Received at London Office

WED. FEB. 4 - 1920

Date of writing Report 3/1 - 1920 When handed in at Local Office 29/1 - 1920 Port of Christiania  
No. in Survey held at Tonsberg Date, First Survey 7-17 Last Survey 2-12-1919  
Reg. Book. on the shu-sew whale "SORKA" (Number of Visits)  
Master Gram Built at Tonsberg By whom built Kaldnes mch. Werkstedt & Co. Tons { Gross 267.73  
Net 76.56  
When built 1919  
Engines made at Bergen By whom made Bergen mch. Werkstedt when made 1919  
Boilers made at Bergen By whom made Bergen mch. Werkstedt when made 1919  
Registered Horse Power Owners Herr. N. Henniksen Port belonging to Tonsberg  
Nom. Horse Power as per Section 28 98.5 99 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple exp. No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 13 1/2 - 22 - 37 Length of Stroke 24 Revs. per minute 110 Dia. of Screw shaft 7 1/16 as per rule 7 1/16 Material of steel  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes 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 ✓ Length of stern bush 2'-7"  
Dia. of Tunnel shaft 7'-6-9" as per rule 7'-6-9" Dia. of Crank shaft journals 7'-5-6" as per rule 7'-5-6" Dia. of Crank pin 7'-7-6" Size of Crank webs 5 1/4 x 14 Dia. of thrust shaft under  
collars 7 1/4 Dia. of screw 9'-3" Pitch of Screw 10'-4" No. of Blades 4 State whether moveable no Total surface 33 sq. feet  
No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work yes  
No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work yes  
No. of Donkey Engines 1 Sizes of Pumps 4 1/2 - 2 3/4 - 4 No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 3, 2" internal dia. In Holds, &c. 2, 2" internal dia.  
No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump circ. p. Is a separate Donkey Suction fitted in Engine room & size yes  
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 ✓  
Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both valves & cocks  
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 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 ✓ Is it fitted with a watertight door ✓ worked from ✓

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

Total Heating Surface of Boilers 1200 Is Forced Draft fitted no No. and Description of Boilers  
Working Pressure 200 lbs Tested by hydraulic pressure to ✓ Date of test ✓ No. of Certificate ✓  
Can each boiler be worked separately ✓ Area of fire grate in each boiler 58 sq' No. and Description of Safety Valves to  
each boiler 1 double Area of each valve 10 sq" Pressure to which they are adjusted 200 lbs Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 12" 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 ✓ 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 ✓ Thickness of plates ✓ Description of longitudinal joint ✓ No. of strengthening rings ✓  
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 ✓  
Material of stays ✓ Area at smallest part ✓ Area supported by each stay ✓ Working pressure by rules ✓ End plates in steam space: ✓  
Material ✓ Thickness ✓ Pitch of stays ✓ How are stays secured ✓ Working pressure by rules ✓ Material of stays ✓  
Area 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 ✓ 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 ✓ Steam dome: description of joint to shell ✓ % 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 ✓ 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 ✓

006809-006818-0083



IS A DONKEY BOILER FITTED? *No.* If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 connecting rod top-end bolts and nuts, 2 connecting rod bottom-end bolts and nuts, 2 main bearing bolts, 1 set coupling bolts, 1 set safety valve springs, 1 propeller, 1 propeller shaft, 1 set piston springs, 1 set feed and bilge pump valves, A quantity of assorted bolts and nuts, Iron of various sizes.

The foregoing is a correct description,  
for Kaldnæs mek. Verksted A/s  
*L.W. Gorking* Manufacturer.

Dates of Survey while building { During progress of work in shops -- 2/2-1917  
During erection on board vessel -- 2/10, 2/12-1919  
Total No. of visits 3  
Is the approved plan of main boiler forwarded herewith *yes*  
" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft
27/10-16	2/10-19	2/2-17	2/2-17	2/2-17
Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	Propeller	
2/10-19	2/2-17	27/11-17	2/10-19	
Completion of pumping arrangements	Boilers fixed	Engines tried under steam		
2/10-19	2/12-19	2/12-19		
Completion of fitting sea connections	Stern tube	Screw shaft and propeller		
2/10-19	2/10-19	2/10-19		
Main boiler safety valves adjusted	Thickness of adjusting washers			
2/12-19	<i>none</i>			
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.	
		<i>steel</i>		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.	
<i>steel</i>		<i>steel</i>		
Material of Steam Pipes		Test pressure		
<i>Copper</i>		<i>400 lbs</i>		
Is an installation fitted for burning oil fuel		Is the flash point of the oil to be used over 150°F.		
<i>no</i>		<i>✓</i>		
Have the requirements of Section 49 of the Rules been complied with				
<i>yes</i>				
Is this machinery duplicate of a previous case		If so, state name of vessel		
<i>no</i>				

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery and boiler of this vessel have been built by Bergens mek. Verksted, Bergen, see Bergen report. The machinery and boiler have been installed to our entire satisfaction.*

*The boiler has been examined under steam pressure and the safety valves set to 200 lbs per sq inch. The machinery has been tried under steam and found to work satisfactory.*

*The workmanship throughout are of the best and to our entire satisfaction. Quick acting stop valve has been fitted to boiler, same examined under steam and found to work satisfactory.*

Recommend *L.M.C. 12, 19* in the Register Book

*It is submitted that this vessel is eligible for L.M.C. 12, 19.*

The amount of Entry Fee ... *£20 -* When applied for, *29/1-1920*  
Special ... *£150 -*  
Donkey Boiler Fee ... *£* When received, *31/2/20*  
Travelling Expenses (if any) *£*  
FRI FEB. 20. 1920

Committee's Minute  
Assigned *+ L.M.C. 12, 19*

*Per Björn Røli* *Linda R. Lyngstad*  
Engineer Surveyor to Lloyd's Register of Shipping.  
FRI DEC. 17 1920

