

Rpt. 4.

REPORT ON MACHINERY.

No. 6005.

Received at London Office

SAT NOV 20 1920

Date of writing Report 12th Nov. 1920 When handed in at Local Office

Port of Copenhagen

No. in Survey held at Høleby and Rødbyhavn
Reg. Book. 55890. on the Steel Auxiliary Tug No. 4 "Danedronning"Date, First Survey 30th Jan. 1918 Last Survey 9th July 1920

(Number of Visits 20)

Gross 1688.08

Net 1227.58

Master A. Sandvej Built at Rødbyhavn By whom built Rødbyhavn Jernskibsværft When built 1919-20

Engines made at Høleby By whom made Høleby Dieselmotor Fabrik when made 1920

Boilers made at Stockton By whom made Messrs. Riley Bros. Lim. when made 1919.

Registered Horse Power 320 Owners Dampskibsselskabet "Oceania" Port belonging to Copenhagen

Nom. Horse Power as per Section 28 58 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines 2 off, 4 stroke, cycle single acting No. of Cylinders 2 x 4 No. of Cranks 2 x 4

Dia. of Cylinders 300 mm Length of Stroke 420 mm Revs. per minute 240 Dia. of Screw shaft 152.5 mm Material of screw shaft S.M. 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 Yes If the liner is in more than one length are the joints burned Yes 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 610 mm

Dia. of Tunnel shaft 140 mm Dia. of Crank shaft journals 170 mm Dia. of Crank pin 170 mm Size of Crank webs 250 x 84 Dia. of thrust shaft under

collars 140 mm Dia. of screw 1600 mm Pitch of Screw 1180 mm No. of Blades 4 State whether moveable No Total surface 1.03 sq m

No. of Feed pumps None Diameter of ditto Stroke Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 80 mm Stroke 76 mm Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 belt driven from main engine Sizes of Pumps 340 x 254 mm; 102 x 228 mm No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 off 2 1/4" 1 off 4 1/2" In Holds, &c. 3 off 2 1/4" from overhead; 2 off 2 1/4" from Forehold; 1 off 3" from

repulse tank; 2 off 3" from No. 1 DB tank; 2 off 3" from No. 2 DB tank; 2 off 3" from Dup tank; 2 off 3" from No. 3 DB tank; 1 off 3" from A.P. tank.

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

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 donkey 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 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 No bunkers How are they protected Yes

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 No tunnel Is it fitted with a watertight door Yes worked from

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

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

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

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

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

Smallest distance between boilers or uptakes and bunkers or woodwork 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

Pitch of rivets Lap of plates or width of butt straps

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

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

Material Outside diameter

No. and Description of Furnaces in each boiler No. of strengthening rings

Length of plain part Thickness of plates Description of longitudinal joint

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

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

W413-0176 1/2

Lloyd's Register Foundation

yes.

See accompanying list.

AKTIESELSKABET
HOLEBY DIESELMOTOR FABRIK

HULLS OF DISSEMINATED		Manufacturer.
<p><i>E. A. Hayes</i></p>		<p>31/8 19/10 1917. 30/1, 11/4, 27/5, 17/6, 21/8 1918. 15/5, 10/6, 14/7, 26/7, 6/9, 4/10, 10/11, 1919. 20/1,</p>
<p>Dates of Survey while building</p>	<p>During progress of work in shops - -</p>	<p>15/3, 7/6, 11/6, 5/9, 7/7. 20.</p>
	<p>During erection on board vessel - - -</p>	<p>20.</p>
	<p>Total No. of visits</p>	<p>20.</p>
<p>Is the approved plan of main boiler forwarded herewith</p>		<p>None</p>
<p>" " donkey " " "</p>		<p>" " " " "</p>

Dates of Examination of principal parts—Cylinders $3/8.17$ $20/1.18$. Slides ✓ Covers $30/11/4.18$ Pistons $30/1.18$ Rods ✓
Connecting rods $3/8.17$. Crank shaft $19/10.17$ $9/4.18$ Thrust shaft $19/10.17$. Tunnel shafts $19/10.17$ $15/5.17$. Screw shaft $15/5.17$. Propeller $27/5.18$
Engines and boiler seatings $9/6.20$. Engines holding down bolts $9/6.20$.

Connecting rods	✓	Engines holding water	15/5 10/6 19 9/9
Stern tube	15/3 20	Steam pipes tested	✓
	9/1 20	Boilers fired	✓
		Engines tried under steam	15/5 10/6 19 9/9

Stern tube	9/6. 20.	Boilers fixed	11/6. 20.	Engines tried under steam	11/6. 20.
Completion of pumping arrangements	11/6. 20.	Stern tube		Screw shaft and propeller	

Completion of fitting sea connections ✓

✓ Stern tube 1/6. 20. ✓

✓ Thickness of adjusting washers ✓

5342-4

✓ Main boiler safety valves adjusted. Thickness of adjusting washers 4.075
No. 1631-32 Identification Mark on Do. 8.2-18 JHK Material of Thrust shaft S/M Steel. Identification Mark on Do. 8.17-18 32

Material of Crank shafts *SM Steel* Identification Mark on Do. *13.2.18 J.H.K.* Material of Thrust shafts *SM Steel* Identification Marks on Do. *A 32*
Intermediate *SM Steel* Identification Marks on Do. *5.11.17 A.P.P.* Material of Screw shafts *SM Steel* Identification Marks on Do. *A 32*

Material of ^{Intermediate} Tunnel shafts S.M Steel. Identification Marks on Do. ⁸ 5328-39 8.10. AFG Material of Shaft ² Test pressure 1500 PSI

Material of Steam Pipes.....
 Is the flash point of the oil to be used over 150°F.....

Is an installation fitted for burning oil fuel ☒
 Requirements of Section 49 of the Rules been complied with ☒
 Draughtsman's Yard No. 1.

Have the requirements of Section 49 of the Rules been complied with? Yes If so, state name of vessel Danekong, Yard No. 1.

Is this machinery duplicate of a previous case? Yes If so, state name of vessel and date of previous case with the Rules for Special

Is this machinery duplicate of a previous case? *In accordance with the Rules for Special*
and Remarks (State quality of workmanship, opinions as to class, &c.)

General Remarks (State quality of workmanship, opinions as to cost, &c.)

I have examined the material and workmanship from the commencement of construction to the present time, and find that the same is of a high quality, and that the workmanship is of a high quality, and that the cost is reasonable.

Survey we have examined the material and workmanship of the whole machinery under working conditions and found

until the final trial of the whole machinery under
+ 11 material used in the construction of the engines a

it good in every respect. The material used in the (2000) ...
... required by the Rules or as per London ...

air receivers has been tested as required by the rules of the Board of Fire Commissioners and the dimensions are as specified and in accordance with the rules of the Board of Fire Commissioners.

E dated 11th Febr. 1915 and the dimensions are as specified and
Sadar letter dated 11th Septbr. 1917.

with the Rules, the approved plans and London letter dated 11 Sept 1861.

The air receivers have been tested in our presence by hydraulic pressure.

to twice the working pressure. - On the trial trip the main and auxiliary

to twice the morning passenger.
engines were tested under full power working conditions found to work satisfactorily and.

engines were tested under full power and found good.

and the manoeuvring of the main engine

to have notation of \times L.M.C - 7.20.

Recommend the vessel's machinery to have overhaul.

The amount of Entry Fee ... ~~Rs.~~ 25 : 50 :
 17. 11. 24.
 When applied for,
 17. 11. 24.
 J. P. Deutch, Klaus

Special No. 222 : 35 : 1928
When received, *A. O. F. Smith*
Engineer Surveyor to Lloyd's Register of Ships

Donkey Boiler Fee ... £ : : When received, 4/17/19

Travelling Expenses (if any) £ 445 : 25 : 4/17/19

Travelling Expenses (if any) £: 775 : 20 :) 11. 19. 1920

Committee's Minute TUE. 7 DEC. 1920

Assigned + Lmb 7.20 REPORT CERTIFICATE WR

Assigned oil engines 1915 CERTIFIED



Copenhagen

Continuation of Report No. 6005 dated 12th Nov. 1920 on the

Steel Aux. Twin Sc. 4 Mast. Sr. "Danedronning", Røddlyhavns Skibsværft
Yard No. 2.

SAT. NOV. 20 1920

List of Spare Gear.

Main Engines:-

- 1 cylinder cover complete with valves & seats, springs &c. fitted. ✓
- 1 piston complete with connecting rod. ✓
- 4 sets of piston packing rings. ✓
- 2 crank pin bolts with nuts. ✓
- 2 main bearing bolts with nuts. ✓
- 1 set of coupling bolts for crank shaft. ✓
- 1 " " " " intermediate shaft. ✓
- 4/2 main bearing brasses, 300 mm. ✓
- 4/2 " " " 148 " ✓
- 4/2 crank pin brasses. ✓
- 4/2 connecting rod top end brasses. ✓
- 4/2 thrust bearing brasses. ✓
- 4 thrust horse shoes. ✓
- 4/2 brasses for intermediate shafts. ✓
- 8 exhaust valves complete. ✓
- 4 suction valves complete. ✓
- 2 starting valves complete. ✓
- 2 fuel " " ✓
- 4 mouth-pieces with sprayers for fuel valves. ✓
- 8 valve spindles with nuts. ✓
- 2 starting valve spindles with thrust sockets. ✓
- 1 complete set of springs. ✓
- 1 fuel pump complete. ✓
- 1 complete set of all moving parts for the daily fuel supply pump. ✓
- 2 delivery and 2 suction valves for circulating water pump. ✓
- 2 " " 2 " " lubricating oil pump. ✓

A quantity of assorted studs and bolts with nuts, unions and pipes &c. of the sizes used. -

Filter material for lubricating oil filter and packing material and leather collars for the fuel pumps. -

Main air compressors:- 1 piston, 6 H.P. and 3 I.P. piston packing rings, 2 H.P. and 2 I.P. delivery valves, 2 H.P. suction valves, 1 set of springs complete, 1 set of crank pin brasses, 1 set of crosshead brasses, 1 crosshead bolt, 1 top-piece for the cylinder, 1 top-piece for the working air receiver with valves complete, 4 valve spindles and 2 manometers for air receivers, 4 cooling coils for compressors. -

Auxiliary Motor:- 1 piston with packing rings, 2 sets of piston packing rings, 1 ignition valve, 1 exhaust valve, 1 set of valves for motor and compressor, 1 set of springs for motor and compressor, 2 mouth-pieces with strainers for fuel oil, 1 set of crank pin brasses, 1 set of connecting rod top end brasses. - A number of assorted springs for all valves and safety valves as well of the main engines as of the auxiliary motor, compressors and pumps. -