

REPORT ON YACHT MACHINERY.

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Date of writing Report 29th Nov. 1920 When handed in at Local Office 19 Port of Copenhagen
 No. in Survey held at Holeby & Rødbyhavn Date, First Survey 31st Aug. 1917 Last Survey 18th Sept. 1920
 Reg. Book. 78529 on the Steel auxiliary Tonn. Sr. 4 Mast. Sr. "Danefolk" (Yard No. 3) (Number of Visits 20)
 Master A. A. Hansen Built at Rødbyhavn By whom built Rødby Havn Jernskibsværft Tons { Gross 1685.73
 Engines made at Holeby By whom made H. Holeby Diesel motor Fabrik when made 1920 Net 1228.17
 Boiler made at Stockton By whom made Messrs. Riley Bros. Ltd. when made 1919 When built 1920
 Registered Horse Power 320 Owners Dampskibsselskabet Oceana 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 SM 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 Y If the liner is in more than one length are the joints burned Y 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 Y If two
 liners are fitted, is the shaft lapped or protected between the liners Y 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 mm 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 m²
 No. of Feed pumps None Diameter of ditto Y Stroke Y Can one be overhauled while the other is at work Y
 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 Sizes of Pumps 340 x 254 mm x 105 x 176 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" fr. afterhold, 2 off 2 1/4" fr. Forehold, 1 off 3" fr. F.P.
 tank, 2 off 3" fr. No. 1 P.B. tank, 2 off 3" fr. No. 2 P.B. tank, 2 off 3" fr. Dup. tank, 2 off 3" fr. No. 3 P.B. tank, 1 off 3" fr. F.P. tank.
 No. of Bilge Injections 2 sizes 2 1/2" Connected to condenser, or to circulating pump circ. fr. 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 Y
 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 Y worked from Y

BOILERS, &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
 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 rivets. Working pressure of shell by rules Size of manhole in shell
 plate
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom
 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

IS A DONKEY BOILER FITTED? *Yes.* If so, is a report now forwarded? *Yes.*

SPARE GEAR. State the articles supplied:— *See accompanying list.*

The foregoing is a correct description,

**AKTIESELSKABET
HOLEBY DIESELMOTOR FABRIK**
M. Mattsson, Stockholm Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *21/8, 19/10. 19; 30/1, 11/4, 29/5, 19/6, 21/8. 18; 15/5, 10/6, 14. 26/7, 6/9, 4/10, 10/11. 19. 20/1, 15/3. 20.*
 { During erection on board vessel --- } *9/6, 5/7, 13/9, 18/9. 20.*
 Total No. of visits *20*

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders *30/1, 11/4. 18* Slides Covers *30/1, 11/4. 18* Pistons *31/8. 17. 30/1. 18* Rods
 Connecting rods *31/8. 17.* Crank shaft *29/5, 19/6. 18* Thrust shaft *19/10. 17* Tunnel shafts *19/10. 17 15/5. 19* Screw shaft *15/5. 19.* Propellers *29/5. 18*
 Stern tube *15/3. 20* Steam pipes tested Engine and boiler seatings *9/6. 20.* Engines holding down bolts *13/9. 20.*
 Completion of pumping arrangements *13/9. 20* Boilers fixed Engines tried under steam *13/9, 18/9. 20*
 Completion of fitting sea connections *9/6. 20* Stern tubes *9/6. 20.* Screw shaft and propeller *5/7. 20.*

Main boiler safety valves adjusted Thickness of adjusting washers
 Material of Crank shaft *SM Steel.* Identification Mark on Do. *440725 No. 16 33-3F 8-12-18-5HK* Material of Thrust shaft *SM Steel.* Identification Mark on Do. *5046-49 8-17. A.F.*
 Material of Tunnel shafts *SM Steel.* Identification Marks on Do. *5-18. A.T.P.* Material of Screw shafts *SM Steel.* Identification Marks on Do. *A 322-5344-45 8-17. A.F.*
 Material of Steam Pipes Test pressure

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 *Dane Konge, Davedronning (Yard Nos. 1 & 2)*

General Remarks (State quality of workmanship, opinions as to class, &c. In accordance with the Rules for Special Surveys we have examined the material and workmanship from the commencement of construction until the final trial of the whole machinery under working condition and found it good in every respect. The material used in construction of the engines and air receivers has been tested as required by the Rules or as per London letter E dated 11th Febr. 1915, and the dimensions are as specified and in accordance with the Rules, the approved plans and London letter E dated 11th Sept. 1917. - The air receivers have been tested in our presence by hydraulic pressure to twice the working pressure. On the trial trip the main and aux. engines were tested under full power working condition and found to work satisfactorily and the manoeuvring of the main engines tested and found good.

Recommend the vessel's machinery to have notation of *SMC-9.20.*

For Machinery plans see s.n. "Husvik"

The amount of Entry Fee ... *A. 25 : 50* : When applied for, *6. 12 19 20*
 Special ... *A. 221 : 85* :
 Donkey Boiler Fee ... *£ :* : When received, *11/17/21*
 Travelling Expenses (if any) *£ 381 : 70* : *9/12/21*

A. O. J. J. J.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 17 DEC. 1920*
 Assigned *+ LMB 920 oil engines*



Surveyors Office, Genl.

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

Steel Aux. Twin Sc. 4 Mast Sr. "Danefolk"

Røddly Havns Jernskibsvarft Yard No. 3.

List of Spare Gear.Main engines:-

- 1 cylinder pair 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 set of " " " intermediate shaft. ✓
 1/2 main bearing brasses, 300 mm. ✓
 1/2 " " " 148 " ✓
 1/2 crank pin " " ✓
 1/2 connecting rod top end brasses. ✓
 1/2 thrust bearing brasses. ✓
 4 thrust horse shoes. - 1/2 brasses for intermediate shafts. ✓
 8 exhaust valves complete. - 4 suction valves complete. ✓
 2 starting valves complete. 2 fuel valves complete. ✓
 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 " " for 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 L.P. piston packing rings,
 2 H.P. and 2 L.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 work-
 ing 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,
 ignition bulb, 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.