

## REPORT ON OIL ENGINE MACHINERY.

No. 691

Date of writing Report 4th Sept. 1952 When handed in at Local Office 4th Sept. 1952 Port of KIEL Received at London Office 27 Oct 1952

No. in Survey held at Kiel

Date, First Survey 19th April

Last Survey 19th July

1952

Reg. Book.

Number of Visits 13

90211s Single

on the

Screw vessel

m.v. "HENRIK DANICA"

mm 002

.1111 0081

H.M.S.C.

Gross 500

Tons

Net -

Built at Rendsburg

ETA 01 mm 0.82 - I.82

By whom built WERFTSCHIFFBAU GMBH. KIEL

Yard No. 546

When built 1952

Engines made at Kiel By whom made Maschinenbau Kiel Aktiengesellschaft Engine No. 10520 When made 1951

Donkey Boilers made at - By whom made - Boiler No. - When made -

Brake Horse Power { Maximum 750 Service 750 Owners H.H. Andersen &amp; Co., Kiel Port belonging to Copenhagen

I.N. as per Rule 150 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted yes

Trade for which vessel is intended

ENGINES, &amp;c. — Type of Engines MAK heavy oil type MSu 581 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

an Indicated Pressure Span of bearings (i.e., distance between inner edges of bearings in

of a crank) Is there a bearing between each crank Revolutions per minute { Maximum Service

wheel dia. Weight SEE KIEL REPORT NO. 486 Means of ignition Kind of fuel used

ank aft, Aft built Solid forged Semi built dia. of journals as per Rule as fitted Crank pin dia. Crank webs Mid. length breadth shrunk Thickness parallel to axis

wheel shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule 180 mm

Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 220 mm Is the tube shaft fitted with a continuous liner no

Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the

eller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

he 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-

osive. If two liners are fitted, is the shaft lapped or protected between the liners

of stern tube yes If so, state type Cedervall Is an approved Oil Gland fitted at the after

eller, dia. 2120 mm Pitch 1230 mm No. of blades 4 Material bronze whether moveable no Total developed surface sq. feet

ent of inertia of propeller including entrained water (xxxxxx kgm<sup>2</sup>) 804 kgm<sup>2</sup> Kind of damper if fitted friction type

od of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine yes Means of

cation forced Thickness of cylinder liners 30 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

rged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being siphoned

to the engine ballast pump. Cooling Water Pumps, No. and how driven (4) ME &amp; E.motor Working F.W. ME pump

pump. Spare F.W. pump S.W. pump Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Pumps worked from the Main Engines, No. and capacity one 140 mm x 90 mm Can one be overhauled while the other is at work

os connected to the Main Bilge Line No. and capacity of each Ballast pump (ED) 60 tons/hr; wash deck &amp; Fire pump(ED) 12 tons/hr.

cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

gements --

t Pumps, No. and capacity one 66 t/hr. Power Driven Lubricating Oil Pumps, including spare pump, No. and size one engine driven 9 t/hr.

Same as a spare pump and has auxiliary suction and discharge valve yes Branch Bilge Suctions

d size: In machinery spaces three each 70 mm dia. In pump room

ds, &amp;c. forwd. suctions (P&amp;S) 70 mm dia.; aft suctions (P&amp;S) 80 mm dia.

Bilge Suctions to the engine room bilges, No. and size 1 a 125 mm dia. &amp; 1 a 51 mm dia. dia. from cooling water pump

the bilge suction pipes in holds and main engine driven pump 22.5 tons/hr; C.H.

protection used on working floor, with straight tail pipes to the bilges yes

Sea Connections fitted direct on the skin of the ship yes Are they fitted with valves or cocks at valve points Are they fixed

ily high on the ship's side to be seen without lifting the platform plates yes Are the overboard discharges above or below the deep water line above

y 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

pipes pass through the bunkers none How are they protected

ipes pass through the deep tanks none Have they been tested as per Rule

pipes, cocks, valves and pumps in connection with the machinery accessible at all times yes

rrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery

or from one compartment to another yes Is the shaft tunnel watertight aft Is it fitted with a watertight door worked from

d vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. one No. of stages two diameters 120 (120-108) stroke 70 mm driven by ME

ary Air Compressors, No. one No. of stages two Capacity 36 m<sup>3</sup> per hour (with motor)Auxiliary Air Compressors, No. one No. of stages two Capacity 26 m<sup>3</sup> per hour (with motor)

June 4 provision is made for first charging the air receivers E driven compressor - and hand started generator. © 2020

ing Air Pumps or Blowers, No. How driven

ary Engines Have they been made under survey yes (4 in No.) Engine Nos. 1274153/58; 1272773/78; 1367013/14;

Makers name Klöckner - Humboldt - Deutz AG. Position of each in engine room P.F.; P.A.; S.F.; S.A.

W; 50 KW; 8 KW &amp; 24 KW respectively) Report No. See Hambg. Rpt. 10 601/605, 738,

3000 &amp; 988.

003487-003494-0249 1/2

Dr. C. No. 1662  
2864

**AIR RECEIVERS:** Have they been made under survey?  main - yes  aux. - no Survey State No. of report or certificate.

State full details of safety devices.  spring loaded relief valve on each vessel.

Can the internal surfaces of the receivers be examined and cleaned?  yes Is a drain fitted at the lowest part of each receiver?  yes

**Injection Air Receivers, No.**  1 **Cubic capacity of each**  Internal diameter  thickness

Seamless, welded or riveted longitudinal joint.  Material  Range of tensile strength  Working pressure

Starting Air Receivers, No.  3 main  Total cubic capacity  1800 litr. Internal diameter  500 mm thickness

Seamless, welded or riveted longitudinal joint.  Material  "HIERIK DAEMIC"  tensile strength  58.1 kg/mm<sup>2</sup> Working pressure

**IS A DONKEY BOILER FITTED**  No answer given so is a report now forwarded.

Is the donkey boiler intended to be used for domestic purposes only?

**PLANS.** Are approved plans forwarded herewith for shafting.  yes **See Certs. as above** Separate fuel tanks

(If not, state date of approval)

**Donkey Boilers**  General pumping arrangements  yes Pumping arrangements in machinery space  yes

**Oil fuel burning arrangements**

Have Torsional Vibration characteristics been approved?  yes **See Date and particulars of approval Secretary's letter dated 3/11/52**

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied?  yes State if for "short voyages" only

State the principal additional spare gear supplied.

*See on TROTER JAH 1952*

**Welded receivers G. m. B. H.**

The foregoing is a correct description,

**Manufacturer.** *Rendsburg, den 10.9.1952*

**Dates of Survey while building**

- During progress of work in shops  13
- During erection on board vessel  April: 19 & 24, May: 7, June: 13, 19, 24 & 30, July: 7, 12, 14, 15, 16, 19, 1952.

Total No. of visits  13

**Dates of examination of principal parts—Cylinders**  Covers  Pistons  Riveted Rods  Connecting rods

**Crank shaft**  Flywheel shaft  Thrust shaft  19/4 Intermediate shafts  19/5  Tube shaft

**Screw shaft**  19/4 **Propeller**  24/4 Stern tube  19/8 & 24/4 Engine seatings  7/5 Engine holding down bolts  24/6

**Completion of fitting sea connections**  19/6 Completion of pumping arrangements  19/7 Engines tried under working conditions  15/7

**Crank shaft, material**  S.M. Steel Identification mark  LLOYD'S Flywheel shaft, material  08 Identification mark

**Thrust shaft, material**  S.M. Steel Identification mark  KM 364 Intermediate shafts, material  10.9.51 Identification marks

**Tube shaft, material**  Identification mark  Screw shaft, material  S.M. Steel Coupling  Identification mark  20.11.51

**Identification marks on air receivers.** Nos. 89/4, 92/2, 99/3 LLOYD'S TESTI

**Identification marks on oil pipes.** TP 1135 lbs, WP 568 lbs

H.D. 10.8.51 or J.L. 23.7.51

Westdeutsche Mannesmannröhren AG., Düsseldorf-Rath

Welded receivers, state Makers' Name

Is the flash point of the oil to be used over 150°F?  yes

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with?  yes

Full description of fire extinguishing apparatus fitted in machinery spaces. Water service connections and hoses, 2 large & 5 small extinguishers

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo?  no If so, have the requirements of the Rules been complied with

What is the special notation desired?  1.50 mm 08 (28) enclous fls; 1.50 mm 07 (28) enclous hws;

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with.  yes

Is this machinery duplicate of a previous case?  no  yes If so, state name of vessel

**General Remarks** (State quality of workmanship, opinions as to class, Speed restrictions, etc. This machinery has been satisfactorily installed under Special Survey in accordance with the approved plans, and tried under full power working conditions and found in good order. The machinery is eligible, in my opinion, to be classed with the notation + LMC, TS OG and "Strengthened for Navigation in Ice".

**Committee's Minute**

The amount of Entry Fee (including excessive travelling time) £ 600,00  When applied for  OWT  ENCL

Special  When received  OWT  ENCL

Donkey Boiler Fee... £  When received  OWT  ENCL

Travelling Expenses (if any) £  300,00

**Assigned** A. E. ; F. S. ; A. P. I. P. I. **LMC 752**  **O.P.**

**Engineer Surveyor to Lloyd's Register of Ships** *J. Bowman*

**Committee's Minute**  **TUES. 18 NOV 1952**

**Assigned** A. E. ; F. S. ; A. P. I. P. I. **LMC 752**  **O.P.**

**Assigned** A. E. ; F. S. ; A. P. I. P. I. **LMC 752**  **O.P.**

Continuation of Report No. 691 dated 4th September, 1952 on the

HENRIK DANICA

ENGINE ROOM ARRANGEMENT.

6 cyl. Aux. Engine and 50 KW Dynamos (P.s.f.)

6 cyl. Aux. Engine and 50 KW dynamo (p.s.a.)

2 cyl. Aux. Engine and 8 KW dynamo (s.s.f.)

4 cyl. Aux. Engine and 24 KW dynamo (s.s.a.)

Shaft driven 8 KW dynamo

Main switchboard

E.D. Fresh C.W. pump

E.D. Deck wash and fire pump

E.D. Ballast pump

E.D. Oil fuel transfer pump

Lub. oil pump

2 E.D. Air Compressors

E.D. Sanitary pump

3 Main starting air receivers

Control heating boiler

Domestic fresh water pump

Lub. oil purifier

Fuel oil purifier

Aux. Air receivers.

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J. Bowman  
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