

# REPORT ON OIL ENGINE MACHINERY.

No. 5206  
JAN 1951

Received at London Office

Date of writing Report 27.11.5019 When handed in at Local Office 19 Port of GRONINGEN

No. in Survey held at Westerboek Date, First Survey 8.1.50 Last Survey 22-12-1950  
Reg. Book. Number of Visits 13

Single on the Propeller Screw vessel "WESTWARD-HO." Gross 399,83 Tons  
Net 238,33

Built at Westerboek By whom built C.V. G.J. 't Werff's Scheepsbouw Yard No. 260 When built 1950

Engines made at Augsburg By whom made Masch. Fab. Augsburg-Nürnberg a.G. Engine No. 430250 When made 1950

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

Brake Horse Power 375 Owners S. Boudewijn Port belonging to Groningen

M.N. Power as per Rule 110 (109.5) NHP = 98 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Ocean going Dimensions LH m/m

## OIL ENGINES, &c. — Type of Engines MAN. G. 8 V 42 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 52 atm Diameter of cylinders 285 Length of stroke 420 No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 7.00 atm Ahead Firing Order in Cylinders 1-2-4-6-8-7-5-3 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 358 Is there a bearing between each crank yes Revolutions per minute 290

Flywheel dia. 1200 Weight 1100 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) - Means of ignition Comp. Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule 185 as fitted 185 Crank pin dia. 175 Crank webs Mid. length breadth 200 Thickness parallel to axis - All built as fitted 185 Mid. length thickness 89.5 shrunk Thickness around eye-hole -

Flywheel Shaft, diameter as per Rule 180 as fitted 180 Intermediate Shafts, diameter as per Rule - as fitted - Thrust Shaft, diameter at collars as per Rule 170 as fitted 170

Tube Shaft, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule 160 as fitted 160 Is the tube shaft fitted with a continuous liner no

Bronze Liners, thickness in way of bushes as per Rule - as fitted - Thickness between bushes as per Rule - as fitted - Is the after end of the liner made watertight in the propeller boss -

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

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 - Is an approved Oil Gland or other appliance fitted at the after end of tube shaft yes If so, state type Hollow rubber ring Length of bearing in Stern Bush next to and supporting propeller 650

Propeller, dia. 1750 Pitch 1310 No. of blades 3 Material Brass whether moveable no Total developed surface 42 % sq. feet

Moment of inertia of propeller (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 172 kgm<sup>2</sup> Kind of damper, if fitted -

Method of reversing Engines by air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced Thickness of cylinder liners 22.5 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine fund Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

Bilge Pumps worked from the Main Engines, No. one Diameter 13 m<sup>3</sup>/h Stroke cup. 13 m<sup>3</sup>/h Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line (No. and size one à 13 m<sup>3</sup>/h, one à 40 T/h, one à 25 T/h How driven main engine, auxiliary engine

Is the 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 arrangements -

Ballast Pumps, No. and size one à 25 T/h, one à 40 T/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size one à 3.4 m<sup>3</sup>/h, one rotary (tested)

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces 1 @ 2 1/2" In pump room -

In holds, &c. 1 forward à 2 1/2", 2 aft à 2 1/2"

Independent Power Pump Direct Suctions to the engine room bilges, No. and size one à 2 1/2", one à 2 1/2"

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction pipes in the machinery spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the Ship welded Are they fitted with valves or cocks values Are they fixed sufficiently 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

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 -

What pipes pass through the bunkers none How are they protected -

What pipes pass through the deep tanks - Have they been tested as per Rule -

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

Is the arrangement 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 spaces, or from one compartment to another yes Is the shaft tunnel watertight apft Is it fitted with a watertight door - worked from -

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

Main Air Compressors, No. 1 No. of stages 1 diameters - stroke - driven by -

Auxiliary Air Compressors, No. one No. of stages 2 diameters 3 3/4 - 1 1/2" stroke 3/4" driven by V belt main engine

Small Auxiliary Air Compressors, No. one No. of stages 2 diameters 110-95 stroke 85 driven by V belt aux engine

What provision is made for first charging the air receivers Auxiliary engine hand started

Scavenging Air Pumps, No. - diameter - stroke - driven by -

Auxiliary Engines crank shafts, diameter as per Rule Lister C.S. 81454 as fitted L.R. tested 3-10-50 No. one Position Starboard C.R.

Have the auxiliary engines been constructed under special survey yes Is a report sent herewith no

**AIR RECEIVERS:**—Have they been made under survey *yes* ✓ State No. of report or certificate *7002 Rotterdam*  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes* ✓  
 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. *—* Cubic capacity of each *—* Internal diameter *—* thickness *—*  
 Seamless, welded or riveted longitudinal joint *—* Material *—* Range of tensile strength *—* Working pressure *—*  
 Starting Air Receivers, No. *2* ✓ Total cubic capacity *1000 liters* Internal diameter *570* thickness *13*  
 Seamless, welded or riveted longitudinal joint *welded* Material *S.M.S.* Range of tensile strength *43.5* Working pressure *30 kg*

**IS A DONKEY BOILER FITTED** *—* If 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 *20/1'48, 29/8'50* Receivers *Rotterdam* Separate fuel tanks *12/9'50*  
 Donkey boilers *—* General pumping arrangements *3/6'50* Pumping arrangements in machinery space *12/9'50*  
 Oil fuel *pipings* arrangements *12/9'50*  
 Have Torsional Vibration characteristics been approved *yes* ✓ Date of approval *9/11'50*

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied *yes, for unrestricted service*  
 State the principal additional spare gear supplied *—*

The foregoing is a correct description, *N.V. Motorwerf Rotterdam*  
 Manufacturer *Hoogezand*

Dates of Survey while building  
 During progress of work in shops *24 visits (Augsborg Rpt 43.)*  
 During erection on board vessel *1950 July 8; Oct. 17, 19, 24, 25, 31; Nov. 8, 13, 23 Dec. 1, 7, 18, 22.*  
 Total No. of visits *37*  
 Dates of examination of principal parts—Cylinders *See Augsborg Rpt 43* Pistons *—* Rods *—* Connecting rods *—*  
 Crank shaft *—* Flywheel shaft *2-9-50* Thrust shaft *2-9-50* Intermediate shafts *—* Tube shaft *—*  
 Screw shaft *24-10-50* Propeller *21-10-50* Stern tube *13-10-50* Engine seatings *25-10-50* Engine holding down bolts *7-12-50*  
 Completion of fitting sea connections *25-10-50* Completion of pumping arrangements *22-12-50* Engines tried under working conditions *22-12-50*  
 Crank shaft, material *—* Identification mark *—* Flywheel shaft, material *S.M.S.* Identification mark *LLOYDS 11166*  
 Thrust shaft, material *S.M.S.* Identification mark *MB/EMD 2-9-50* Intermediate shafts, material *—* Identification marks *—*  
 Tube shaft, material *—* Identification mark *—* Screw shaft, material *S.M.S.* Identification mark *LLOYDS 11166*  
 Identification marks on air receivers *NOS 353-354*  
*LLOYDS TEST 40,5 kg*  
*W.P. 30 kg EMD 22-6-50*

Welded receivers, state Makers' Name *J & K Smit*  
 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* ✓  
 Description of fire extinguishing apparatus fitted *3 x 9 liters foam*  
 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 *—*  
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with *no* ✓  
 Is this machinery duplicate of a previous case *no* If so, state name of vessel *—*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The Machinery of this vessel was built and fitted under special survey in accordance with the Society's Rules and Regulations and the Secretary's letters. The workmanship is good. The installation has been tried during a trial trip under full working conditions and all found good.*

*In our opinion the machinery of this vessel is eligible for the record of + LMC 12-50 Oil Engine O.G.*

The amount of Entry Fee ... *1/3 x 1095 x 1/560 = 204.-*  
 Donkey Boiler Fee... *—*  
 Travelling Expenses (if any) *—*  
 When applied for *8-1-1951*  
 When received *19*

*Alb. B. ...*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Assigned *+ LMC 12.50 Oil Eng. O.G.*  
 TUES. 23 JAN 1951

