

15 JAN 1960

Rpt. 4b

als and workmanship and give explained as fully as possible.

Date of writing report 20.10.59

Received London

Port Köln

No. 498

Survey held at Köln-Deutz

No. of visits

In shops 7

First date 13.4.59

Last date 2.6.59

H.D. 2084 7255

On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name "SOLVANTI" Gross tons

Owners Managers Deutz Motoren, Rotterdam Port of Registry

Hull built at Waterhuizen By Gebr. van Diepen Yard No. 954 Year Month

Main Engines made at Köln-Deutz By Klöckner-Humboldt-Deutz AG Eng. No. 2515322-329 When 5.59

Gearing made at By

Donkey boilers made at By Blr. Nos. When

Machinery installed at By When

Particulars of restricted service of ship, if limited for classification

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? Is ship intended to carry petroleum in bulk?

Is refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant

Is the refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 1 No. of propellers Brief description of propulsion system engine, flywheel, intermediate shaft

MAIN RECIPROCATING ENGINES. Licence Name and Type No. one airless injection heavy oil RV8M 545

No. of cylinders per engine 8 Dia. of cylinders 320 mm stroke(s) 450 mm 2 or 4 stroke cycle 4 Single or double acting single

Maximum approved BHP per engine 660 at 380 RPM of engine and RPM of propeller.

Corresponding MIP 6.54 kg/cm² For DA engines give MIP top & bottom Maximum cylinder pressure 56 (60) kg/cm² Machinery numeral 132

Are the cylinders arranged in Vee or other special formation? no If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? If so, how are upper pistons connected to crankshaft?

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? No. and type of mechanically driven scavenge pumps or blowers per engine and how driven

No. of exhaust gas driven scavenge blowers per engine Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

If a stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full power

Are scavenge manifold explosion relief valves fitted?

FOUR STROKE ENGINES. Is the engine supercharged? no Are the undersides of the pistons arranged as supercharge pumps? no No. of exhaust gas driven blowers per engine

No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

TWO & FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel 1 Inlet 1 Exhaust 1 Starting 1 Safety 1

Material of cylinder covers cast iron Material of piston cast iron Is the engine equipped to operate on heavy fuel oil? no

Cooling medium for: Cylinders water Pistons no cooling Fuel valves no cooling Overall diameter of piston rod for double acting engines no

Is the rod fitted with a sleeve? no Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the underside of pistons? no

Is the engine of crosshead or trunk piston type? trunk Total internal volume of crankcase 3.52 m³ No. and total area of explosion relief devices 4. area 380 cm²

Are flame guards or traps fitted to relief devices? yes Is the crankcase readily accessible? yes If not, must the engine be removed for overhaul of bearings, etc? no

Is the engine secured directly to the tank top or to a built-up seating? no How is the engine started? with air

Can the engine be directly reversed? no If not, how is reversing obtained? with air

Has the engine been tested working in the shop? yes How long at full power? 6 hours Base 449 T

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 27.7.59 State barred speed range(s), if imposed

for working propeller on the end of the Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? yes

Where positioned? crankshaft pumpside Type friction damper No. of main bearings 9 Are main bearings of ball or roller

type? no Distance between inner edges of bearings in way of crank(s) 346 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) solid

Diameter of journals 220 mm Diameter of crankpins Centre 210 mm Breadth of webs at mid-throw 350 mm Axial thickness of webs 93 mm

If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals carbonsteel Approved 18.2.55 Pins } Minimum 36 kg/mm²

Webs Tensile strength 64 kg/mm²

Diameter of flywheel 1250 mm Weight 2250 kg Are balance weights fitted? no Total weight Radius of gyration

Diameter of flywheel shaft Material Minimum approved tensile strength

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) integral with crankshaft



012678-012685-02442

Deutz

GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This engine has been constructed under special survey of tested materials and is in accordance with the Secretary's letters, approved plans and Rules Requirements. The materials and workmanship are good and the engine, when tested in the shops under full and overload conditions, was found to function satisfactorily. The governor tests were also found satisfactory. This engine, in my opinion, is suitable for main propelling purposes and when satisfactorily installed and reported will be eligible to receive the notation  LMC (with date).

For H. Riedel

H. Riedel

Engineer Surveyor to Lloyd's Register of Shipping.

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS LLOYD'S KLN. 781¹/₁-8 H.R. 22.4.59

CRANKSHAFT OR ~~ROD~~ SHAFT LLOYD'S KLN A.S. 41¹/₄₂ 27.10.58

FLYWHEEL SHAFT -

THRUSTSHAFT -

GEARING -

INTERMEDIATE SHAFTS LLOYD'S KLN. 787¹/₁ H.R. 2.6.59

SCREW AND TUBE SHAFTS -

PROPELLERS -

OTHER IMPORTANT ITEMS

Air receivers:-

Is the installation a duplicate of a previous case? yes If so, state name of vessel Eng. No. 2199706-13

Date of approval of plans for crankshaft 18.2.55 Straight shafting - Gearing - Clutch -

Separate oil fuel tanks - Pumping arrangements - Oil fuel arrangements -

Cargo oil pumping arrangements - Air receivers - Donkey boilers -

Dates of examination of principal parts:-

Fitting of stern tube - Fitting of propeller - Completion of sea connections - Alignment of crankshaft in main bearings -

Engine chocks & bolts - Alignment of gearing - Alignment of straight shafting - Testing of pumping arrangements -

Oil fuel lines - Donkey boiler supports - Steering machinery - Windlass -

Date of Committee -FRIDAY - 5 FEB 1960 Special Survey Fee DM 710.-

Decision - See Rpt. 1 Running Test DM 100.-

[Signature] Expenses DM 81.-

Date when A/c rendered 26.6.59; A/C R

