

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 668

Received at London Office

20 MAR 1956

of writing Report 6th March 1956 When handed in at Local Office 19 Port of Augsburg, Moritzplatz 4

Survey held at Ulm (Donau) Date, First Survey and Last Survey 10. Febr. 1956
 Book. Number of Visits 2

on the Single Twin Triple Quadruple Screw vessel "Zingaw" Tons { Gross.....
 Net.....

at Mainz - Kastel By whom built Messrs. Ruthof Yard No. When built

Engines made at Ulm By whom made Messrs. Klöckner-Humboldt-Deutz AG. Engine No. 1855 749-52 1855-753-56 When made 1956

Generators made at By whom made Generator No. When made

of Sets 2 B.H.P. of each Set 45 M.N. of each Set as per Rule Capacity of each Generator Kilowatts

Set intended for essential services

L ENGINES, &c.—Type of Engines A4L 514 Standard Type 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 70 kg/cm² Diameter of cylinders 110 mm Length of stroke 140 mm No. of cylinders 4 No. of cranks 4

Mean indicated pressure 6.2 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 114

Is there a bearing between each crank Moment of inertia of flywheel (16 m² or Kg.-cm.²) 12.4 kgm² Revolutions per minute 1250

Wheel dia. 485 mm Weight 80 kg Means of ignition compression Kind of fuel used gasoil

drop Semi-forged Semi-built AK-built dia. of journals as per Rule 75 mm Crank pin dia. 75 mm Crank Webs Mid. length breadth 116 mm Thickness parallel to axis
 Mid. length thickness 29 mm Thickness round eyehole

Wheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m² or Kg.-cm.²)

Are means provided to prevent racing of the engine yes Means of lubrication forced Kind of damper if fitted

Are the cylinders fitted with safety valves no Are the exhaust pipes and silencers water cooled or lagged with non-conducting material no

Air Blower Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Working Water Pumps, No. and how driven V Belts Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 1 x 0.375 m³/h eff. each

Compressors, No. No. of stages Diameters Stroke Driven by

Exhausting Air Pumps or Blowers, No. How driven

RECEIVERS:—Have they been made under Survey State No. of Report or Certificate

(other than main engines) State full details of safety devices

Are the internal surfaces of the receivers be examined and cleaned

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

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

Working Air Receivers, No. Total cubic capacity Internal diameter thickness

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

ELECTRIC GENERATORS:—Type

Pressure of supply volts Full Load Current Amperes Direct or Alternating Current

Is an alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

and off Generators, are they compounded as per Rule is an adjustable regulating resistance fitted in series with each shunt field

Are all terminals accessible, clearly marked, and furnished with sockets Are they so spaced

Are the generators shielded that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule

Are the generators under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

Are the generators 100 kw. or over have they been built and tested under survey

State full details of driven machinery other than generator

PLANS.—Are approved plans forwarded herewith for Shafting A 0152-05-19.01 Receivers Separate Tanks
 (If not, state date of approval) DSF 25.1.51

Have Torsional Vibration characteristics if applicable been approved not applicable Armature shaft Drawing No.

Is the spare gear required by the Rules been supplied as per Rules

The foregoing is a correct description,
 KLOCKNER-HUMBOLDT-DEUTZ AG. ULM

Manufacturer.



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 Foundation

014582-014696-0306

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Dates of Survey while building { During progress of work in shops - - } 10th February, 1956
{ During erection on board vessel - - } -
Total No. of visits 1

Dates of Examination of principal parts—Cylinders 10.2.56 Covers 10.2.56 Pistons 10.2.56 Piston rods -
Connecting rods 10.2.56 Crank and Flywheel shafts 15./18.4./10.5.55 Intermediate shafts -

Crank shaft { Material S.M. Steel 39 C 04 Tensile strength 89,7 - 91,6 kg/mm²
Elongation 16,9% on 5 d Identification Marks (LLOYD'S DSF 2741-3
LLOYD'S AUG 7946-4 10.5.55
Flywheel shaft, Material - Identification Marks 2. (LLOYD'S DSF 275/6 15.4.55
LLOYD'S AUG 7946-5 10.5.55
Identification marks on Air Receivers -

Is this machinery duplicate of a previous case - If so, state name of vessel -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These heavy oil auxiliary engines have been constructed under special survey in accordance with the requirements of the Rules of this Society and otherwise with the approved plans. The material used in the construction is good and the workmanship was found to be satisfactory. The engines have been tested running twice on makers' test bed under full-, over-, and partial loads. In my opinion the vessel for which these engines are intended will be eligible for the notation **+** (with date) when the whole machinery has been satisfactorily fitted aboard the vessel and has been tried under full working conditions.

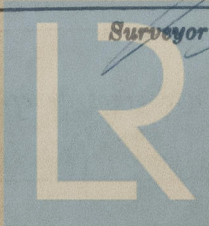
4m.5.52-T. (MADE AND PRINTED IN ENGLAND)

Survey
The amount of Fee 2x4 SHEP DM : 160.-
4 x test bed trial DM 100.-
Travelling Expenses (if any) 2x DM : 60.-
Total.... DM 320.-
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When applied for 19
When received 19

Committee's Minute
Assigned See Rpt. 1.

TUESDAY 21 MAY 1957

Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation