

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 19510.

Received at London Office 12 JAN 1953

Date of writing Report 2nd Jan. 1953 When handed in at Local Office 9th Jan. 1953. Port of Gothenburg

No. in Survey held at Gothenburg Date, First Survey 17th October Last Survey 20th December 1952

Reg. Book. 95496 on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel Motor Tanker "PETRA DAN" Number of Visits 19

Built at Gothenburg By whom built AB Linholmens Varv Yard No. 1028 When built 1952

Owners Rederi Ocean A/S Port belonging to Esbjerg

Oil Engines made at Hedemora By whom made AB Hedemora Verkstäder Engine No. 63-64-65 When made 1952

Generators made at Odense By whom made Thomas B. Thrige A.S. Generator No. 74/75 When made 1952

No. of Sets 3 B.H.P. of each Set 210 M.N. of each Set as per Rule $\frac{BHP}{5} = 42$ Capacity of each Generator 140 Kilowatts

Is Set intended for essential services Yes

OIL ENGINES, &c.—Type of Engines Götaverken DM.240/360 H5 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders - Diameter of cylinders 240 Length of stroke 360 No. of cylinders 5 No. of cranks 5

Lean indicated pressure - Span of bearings (i.e., distance between inner edges of bearings in way of a crank) -

Is there a bearing between each crank - Moment of inertia of flywheel (16 m² or Kg.-cm.²) - Revolutions per minute 450

Flywheel dia. - Weight - Means of ignition Compr. Kind of fuel used Diesel oil

Crank Shaft, ^{Solid forged} ~~Seamless~~ ~~Aluminum~~ dia. of journals - Crank pin dia. - Crank Webs Mid. length breadth - Thickness parallel to axis -

Flywheel 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 None

Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Cooling Water Pumps, No. and how driven 2-el-driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size one on each engine 4.10 T/H

Air Compressors, No. None No. of stages - Diameters - Stroke - Driven by -

Saving Air Pumps or Blowers, No. None How driven -

AIR RECEIVERS: ~~Have they~~ ^{has it} been made under Survey Yes State No. of Report or Certificate SKM 9508

State full details of safety devices Safely valves on the receiver and pipe line

Are the internal surfaces of the receivers be examined and cleaned Yes

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

High Pressure Air Receivers, No. None Cubic capacity of each - Internal diameter - thickness -

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

Low Pressure Air Receivers, No. One Total cubic capacity 200 litres Internal diameter 400 mm. thickness 13 mm.

Seamless, lap welded or riveted longitudinal joint E.W. Material SM steel Range of tensile strength 44.9-45.3 kg/mm² Working pressure 25 kg/cm²

ELECTRIC GENERATORS:—Type Drip proof compound

Pressure of supply 230 volts. Full Load Current 3 x 610 Amperes. Direct or Alternating Current Direct

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

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

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

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

Do the generators are 100 kw. or over have they been built and tested under survey Yes

Are the shafts of driven machinery other than generator Generator only

ANS.—Are approved plans forwarded herewith for Shafting - Receivers - Separate Tanks 22.9.52

Are the Torsional Vibration characteristics if applicable been approved - Armature shaft Drawing No. -

Are the spare gear required by the Rules been supplied Yes

The foregoing is a correct description,

AKTIEBOLAGET LINDHOLMENS VARV
Torgny Lippdal

Manufacturer.



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004003-004008-0119

Dates of Survey while building
 During progress of work in shops - - - - -
 During erection on board vessel - - - - - 17.10. - 20.12.51
 Total No. of visits 19

Dates of Examination of principal parts—Cylinders - - - - - Covers - - - - - Pistons - - - - - Piston rods - - - - -
 Connecting rods - - - - - Crank and Flywheel shafts - - - - - Intermediate shafts - - - - -

Crank shaft
 Material - - - - - Tensile strength - - - - -
 Elongation - - - - - Identification Marks - - - - -

Flywheel shaft, Material - - - - - Identification Marks - - - - -

Identification marks on Air Receivers

LLOYDS TEST
 HP 65 KG/CM²
 WP 40 KG
 3.6.52
 W. L. NO. 595

Is this machinery duplicate of a previous case Yes - - - - - If so, state name of vessel M.S. "NERMA DAN" AB Lindholmens Varv No. 10

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

These auxiliary engines have been fitted on board under our inspection and to our satisfaction and have been tested under full working power and found satisfactory. Please also see Stockholm report No. 8934 attached.

The auxiliary steam engine as per Nottingham surveyors certificate No. C. 14748 attached.

The diesel oil engine for harbour light generator as per Gothenburg surveyor certificate No. 15264 attached.

4m.5.62.-T. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee's Minutes.)

The amount of Fee ... £ -----
 Travelling Expenses (if any) £ -----
 When applied for ----- 19 -----
 When received ----- 19 -----

FRI 23 JAN 1953

Committee's Minute
 Assigned *See F.E. Mchly, rpt.*

Stein Johansson
 Surveyor to Lloyd's Register of Shipping.



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