

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 284

Received at London Office

22 AUG

Date of writing Report 29/7/50 When handed in at Local Office 19/8/50 Port of Stockholm

No. in Survey held at Hedemora Date, First Survey 2.5.50 Last Survey 22.6.1950

g. Book. Single on the Twin Triple Quadruple Screw vessel

Number of Visits 6

Tons Gross 10500 Net -

uilt at Gothenburg By whom built AB. Lindholmens Varv Yard No. 1013 When built 1950

ners Van Ommeren's Scheepvaartbedrijf N.V. Phs. Port belonging to Rotterdam

l Engines made at Hedemora By whom made AB. Hedemora Verkstädter Engine No. 40, 41, 42 When made 1950

nerators made at Odense By whom made Thomas B. Thrige A. S. Generator No. 3003535-6-7 When made 1950

of Sets 3 Engine Brake Horse Power 3 x 210 M.N. as per Rule 3 x 52 Total Capacity of Generators 420 Kilowatts.

Set intended for essential services Yes

**IL ENGINES, &c.**—Type of Engines Götaverken D.M. 240/360 H. 5 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 240 mm. Length of stroke 360 mm. No. of cylinders 5 No. of cranks 5

Mean indicated pressure 6.8 kg/cm<sup>2</sup> Firing order in cylinders 1.3.5.4.2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 311 mm.

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) - Revolutions per minute 450

Flywheel dia 1250 mm. Weight 1910 kg. Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals 160 mm. Crank pin dia. 160 mm. Crank Webs Mid. length breadth 215 mm. Thickness parallel to axis -

as fitted 160 mm. Mid. length thickness 80 mm. Thickness round eye-hole -

Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) -

Are means provided to prevent racing of the engine when declutched 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

ooling Water Pumps, No. None Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

lubricating Oil Pumps, No. and size One on each engine

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

avenging Air Pumps, No. None Diameter - Stroke - Driven by -

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

each receiver, which can be isolated, fitted with a safety valve as per Rule

Are the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

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 by Rules

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

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

**ELECTRIC GENERATORS:**—Type Drip proof, compound Thrige Type KL 21 B (Certificates attached)

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

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 -

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

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

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

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

Details of driven machinery other than generator None

**PLANS:**—Are approved plans forwarded herewith for Shafting No. 8.7.49 Receivers No. 9.7.49 Separate Tanks -

(If not, state date of approval)

Are Torsional Vibration characteristics if applicable been approved Yes 9.7.49 Armature shaft Drawing No. 162998

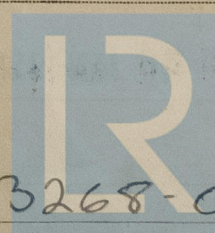
(state date of approval)

**SPARE GEAR** supplied by Makers should be checked onboard.

The foregoing is a correct description,

AKTIEBOLAGET  
HEDEMORA VERKSTÄDER

Manufacturer.



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Lloyd's Register  
Foundation

013268-013277-0238



Dates of Survey while building { During progress of work in shops - - 1950 May 2.3.25. June 20.21.22.  
During erection on board vessel - - -  
Total No. of visits 6

Dates of Examination of principal parts—Cylinders 2.5.50 Cyl. heads 2.5. 50 Pistons 25.5.50 Piston rods Trunk type  
Connecting rods 3.5.50 Crank and Flywheel shafts 2.5.50 Intermediate shafts None

Crank shaft { Material SM-steel Tensile strength 52.6 - 54.6 kg/mm<sup>2</sup>  
Elongation 30 - 32% on 50 mm. Identification Marks No. 101-2 Bnl. 12.49. No. 139 OAS 4.1.50

Flywheel shaft, Material Flywheel fitted on crankshaft flange Identification Marks -

Identification marks on Air Receivers -

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.)

These auxiliary engines have been made under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The workmanship and materials are good and test sheets for the crank- and generator shafts and connecting rods are attached.

The torsional vibration characteristics were approved in the Secretary's letter "E" of the 9.7.49. for a service speed of 450 r.p.m.

The engines have been examined under full power conditions on the testbeds and found satisfactory.

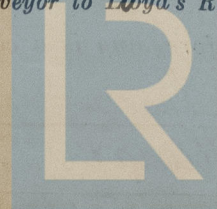
The amount of Fee ... £r. : 540:-- When applied for 29/2 1950

Travelling Expenses (if any) £r. : 232:05 When received 19

FRI. 26 JAN 1951

Committee's Minute  
Assigned See F.E. mch. r.p.

F. Aspelin  
Surveyor to Lloyd's Register of Shipping



Lloyd's Register  
Foundation

Rpt. 13.  
Date of writing  
No. in Reg. Book. 95395  
Built at  
Owners  
Electrical  
Is vessel fitted with  
Have plans  
Heating  
has the governor  
trip switch  
if not complete  
arranged to  
Negat  
test for machinery  
of the generator  
1 x 40 KW.  
port side  
near unprotected  
injury and damage  
contact Yes  
are they in accordance  
and oil Yes  
material is used  
semi-insulating  
Is the construction  
to pilot and earth  
side of switches  
breaker with  
and for each  
Are compartments  
ammeters 5  
equaliser connected