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1949

pt. 4c.
O.O.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 17009.

Received at London Office 31 OCT 1949

Date of writing Report 13th Oct. 1949. When handed in at Local Office 25th Oct. 1949. Port of Gothenburg.

No. in Survey held at Gothenburg Date, First Survey 29th April Last Survey 19th September 1949.

Reg. Book. on the ~~XXXX~~ ~~XXXX~~ ~~XXXX~~ Single Screw vessel M.T. ENEFJELL. Number of Visits 7 Tons Gross 10000. Net

uilt at Gothenburg By whom built Eriksbergs Mek. Verkstads A-B. Yard No. 397 When built

wners Olsen & Ugelstad Port belonging to Oslo

il Engines made at Trollhattan By whom made Nydqvist & Holm A-B. Engine ~~XXXXXX~~ No. 1270 - 1271 When made 1949

enerators made at --- By whom made --- Contract No. --- When made ---

o. of Sets 2 Engine Brake Horse Power 2 x 250 M.N. as per Rule 125 Total Capacity of Generators --- Kilowatts.

Set intended for essential services. Yes

OIL ENGINES, &c.—Type of Engines Heavy oil, trunk type 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 250 mm. Length of stroke 420 mm. No. of cylinders 4 No. of cranks 4

Mean indicated pressure 4.9 kg/cm² Firing order in cylinders 1 - 3 - 2 - 4 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 350 mm.

Is there a bearing between each crank Yes Moment of inertia of flywheel 3570 Kg.cm.sec.² Revolutions per minute 350

Flywheel dia 1250 mm. Weight 1340 kgs. Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as appd. 160 mm. Crank pin dia. 160 mm. Crank Webs Mid. length breadth 230 mm. Thickness parallel to axis --- as fitted 160 mm. Mid. length thickness 86 mm. Thickness round eye-hole ---

Flywheel Shaft, diameter as per Rule --- Intermediate Shafts, diameter as per Rule --- General armature, moment of inertia 740 Kg.cm.sec.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 Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Cooling Water Pumps, No. --- Is the sea suction provided with an efficient strainer which can be cleared within the vessel. ---

Lubricating Oil Pumps, No. and size 1 x 65 litres per minute

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

Scavenging Air Pumps, No. 1 (Double Acting) Diameter 560 mm. Stroke 280 mm. Driven by the engine

AIR RECEIVERS:—Have they been made under Survey Yes State No. of Certificate 6577

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

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Soda and Hot Water

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

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 ---

Starting Air Receivers, No. 1 Total cubic capacity 200 litres Internal diameter 400 mm. thickness 13 mm.

Seamless, lap welded or riveted longitudinal joint El. welded Material S.M. Steel Range of tensile strength 41-47 kg/mm² Working pressure by Rules 40 kg/cm²

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

on and off Yes 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

or 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. ---

Details of driven machinery other than generator Generator only

PLANS.—Are approved plans forwarded herewith for Shafting 4.3.1949 Receivers 4.3.1949 Separate Tanks ---

Have Torsional Vibration characteristics if applicable been approved Yes, London 4.3.1949 Armature shaft Drawing No. 6 B - 8132/1

SHAFTING GEAR As per Rule supplied. To be checked on board.

The foregoing is a correct description, and the particulars of the installation as fitted are as approved for torsional vibration characteristics for a service speed of 350 R.P.M.

NYDQVIST & HOLM AKTIEBOLAG

Manufacturer.

Konstruktionskontoret

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Dates of Survey while building { During progress of work in shops - - 29th April - 19th September, 1949.
During erection on board vessel - - -
Total No. of visits 7

Dates of Examination of principal parts—Cylinders 18.5.1949 Covers 18.5.1949 Pistons 17.6.1949 Piston rods ---
Connecting rods 17.6.1949 Crank and Flywheel shafts 24/9 1948 & 17/6 1949 Intermediate shafts ---

Crank shaft { Material Electro Steel Tensile strength 48.1 - 50.7 kg/mm².
Elongation 37.0 - 36.0 % Identification Marks LLOYD'S No. 684 OS 24.9.48 LLOYD'S No. 903 OS 17.6.49

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

Identification marks on Air Receivers. No. 2955
LLOYD'S TEST 64 KGS.
WP 40 KGS.
SW 24.3.49

If welded air receiver, state makers: Avesta Jernverks A-B., Avesta.
Is this machinery duplicate of a previous case Yes If so, state name of vessel Eriksbergs Mek. Verkstad A-B's Yard No. 396,
Gothenburg report No. 16939.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These auxiliary engines have been built under special survey in accordance with the Rules and approved plans.
The workmanship and materials are good and the electric welding of the bedplates has been carried out to my satisfaction.
Certificates in respect of the crank shafts and air receiver are attached.
The engines have been tried under full working power conditions in shop and found to work satisfactorily.
Test certificates for generators built under survey NOT yet received

The amount of Fee ... Kr. 440:00
SS on EW bedplates Kr. 60:00
Travelling Expenses (if any) Kr. 45:00
When applied for 25th Oct. 19 49.
When received --- 19 ---

FRI. 22 SEP 1950

Committee's Minute
Assigned *See minute on I.B. Rev.*

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

501.148-12 (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minute.)