

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 3104.

Received at London Office

Date of writing Report 6th June, 1952. When handed in at Local Office 11th June 1952. Port of MALMÖ

No. in Reg. Book. 41109s. Survey held at Malmö Date, First Survey 29.11.51 Last Survey 30th May 1952. Number of Visits 14.

Single on the Twin Screw vessel M/T "SOYA-MARGARETA" Tons Gross 10.628 Net 7.906

Built at Malmö By whom built Kockums Mek. Verkstads A.-B. Yard No. 343 When built 1952.

Owners Rederi A.-B. Soya Port belonging to Stockholm Eng.

Oil Engines made at Malmö By whom made Kockums Mek. Verkstads A.-B. Contract No. 621,622 When made 1952.

Generators made at Västerås By whom made ASEA Contract No. When made

No. of Sets 2 Engine Brake Horse Power 280 M.N. as per Rule 57 Total Capacity of Generators 2x200 Kilowatts.

Is Set intended for essential services yes.

OIL ENGINES, &c.—Type of Engines Heavy oil Kockum-MAN-G5V42 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 275 mm Length of stroke 420 mm No. of cylinders 5 No. of cranks 5

Mean indicated pressure 17 kg/cm<sup>2</sup> Firing order in cylinders 1.2.4.5.3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 352 mm

Is there a bearing between each crank yes Moment of inertia of flywheel (16 mm<sup>2</sup> or Kg.-cm.<sup>2</sup>) 6506x10<sup>3</sup> Revolutions per minute 350

Flywheel dia. 1625 mm Weight 1495 kg. Means of ignition Cmpmp. Kind of fuel used Heavy oil

Crank Shaft, dia. of journals 170 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 280 mm Thickness parallel to axis 85 mm shrunk Thickness round eyehole

Flywheel Shaft, diameter 170 mm Intermediate Shafts, diameter 170 mm General armature, moment of inertia (16 mm<sup>2</sup> or Kg.-cm.<sup>2</sup>) 1021x10<sup>3</sup>

Are means provided to prevent racing of the engine when declutched 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. 2 à 35 m<sup>3</sup>/h Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Lubricating Oil Pumps, No. and size 1-2 m<sup>3</sup>/h for each engine

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

Scavenging Air Pumps, No. none Diameter - Stroke - Driven by -

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

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

Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces manhole

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

High Pressure Air Receivers, No. 1 Spare Cubic capacity of each 200 ltr. Internal diameter 474 mm thickness 13 mm

Seamless, lap welded or riveted longitudinal joint El. weld. Material S.M. Steel Range of tensile strength 47.4-47.9 Working pressure by Rules -

Starting Air Receivers, No. 2 Total cubic capacity 20.4 m<sup>3</sup> Internal diameter 1590 mm thickness 30 mm

Seamless, lap welded or riveted longitudinal joint El. weld. Material S.M. Steel Range of tensile strength 43.9-47.5 Working pressure by Rules -

ELECTRIC GENERATORS:—Type ASEA

Pressure of supply 230 volts Full Load Current 870 Amperes Direct or Alternating Current Direct

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

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

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

Details of driven machinery other than generator Air compressor - 2 stages - Diam.-110-300 mm; stroke 240 mm.

PLANS.—Are approved plans forwarded herewith for Shafting 12.7.49 Receivers 27.2.51 Separate Tanks -

Have Torsional Vibration characteristics if applicable been approved 12.7.51 Armature shaft Drawing No. S. 10797 A noted 4.7.49.

SPARE GEAR As per Rule

Additional:- 1 cylinder liner, 1 cylinder cover, 2 pistons with gudgeon pins.

The foregoing is a correct description,

MEKANISKA VERKSTADS AKTIEBLAG

Manufacturer.



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Dates of Survey while building  
 During progress of work in shops - - 29.11.51, 4.2.52, 5.2.52, 15.2.52, 18.2.52, 20.2.52, 24.3.52, 27.3.52.  
 During erection on board vessel - - 16.4.52, 15.5.52, 17.5.52, 19.5.52, 24.5.52, 30.5.52.  
 Total No. of visits 14

Dates of Examination of principal parts—Cylinders 29.11.51 Covers 4.2.52 Pistons 4.2.52 Piston rods -

Connecting rods 4.2.52 Crank and Flywheel shafts 5.2.52 Intermediate shafts -

Crank shaft { Material S.M. Steel Tensile strength 50.7 - 52.6 kg/cm<sup>2</sup>  
 Elongation 33 - 34 % Identification Marks Lloyd's Nos. 7727/8 G.A. 9.851.

Flywheel shaft, Material - Identification Marks -

Identification marks on Air Receivers. Nos. 119 + 120 - Lloyd's test 48.5 kg/cm<sup>2</sup>  
 W.P. 30 kg/cm<sup>2</sup> T.O. 21.3.52  
 No. 111; Lloyd's test 60 kg/cm<sup>2</sup> W.P. 30 kg T.O. 8.8.51

Is this machinery duplicate of a previous case. yes. If so, state name of vessel M/T "AVANCE"

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

These two auxiliary Diesel engines have been constructed and fitted onboard ship under Special Survey, in accordance with the approved plans and the Society's Rules.  
 The material and workmanship are good.

*(This area contains horizontal lines for additional remarks or notes.)*

The amount of Fee ... Kr: ... xk : 540:- { When applied for 11th June, 19 52.  
 Travelling Expenses (if any) £ : : { When received 19

*(Signature)*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 8 JUL 1952  
 Assigned See F.E. mch. rpt.



50.1.48.—L. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee Minute.)