

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 11027

Received at London Office

20 OCT 1939

Date of writing Report 10 Oct. 39 When handed in at Local Office 10 Port of Copenhagen
 No. in Survey held at Copenhagen, Odense & Esbener Date, First Survey 2nd January 1939 Last Survey 1st October 1939
 Reg. Book. 39505 on the Single Screw vessel "INDIAN REEFER". Number of Visits 30.

Built at Esbener By whom built Helsingørsk Jernsk. & Mstb. Yard No. 259 When built 1939
 Owners J. Lauritzen Port belonging to Esbjerg
 Oil Engines made at Copenhagen By whom made Bürmeister & Wain Contract No. 3127-8-9 When made 1939.
 Generators made at Odense By whom made Thomas B. Thrice Contract No. 232790-91-92 When made 1939.
 No. of Sets 3 Engine Brake Horse Power 360 Nom. Horse Power as per Rule Total Capacity of Generators 720 Kilowatts.

OIL ENGINES, &c.—Type of Engines Pierrel, trunk piston, solid inject 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 245 mm Length of stroke 400 mm No. of cylinders 6 No. of cranks 6.
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 303 mm. Is there a bearing between each crank Yes.
 Revolutions per minute 500. Flywheel dia. 1300 mm Weight 1276 kgs. Means of ignition Compression Kind of fuel used Heavy oil.
 Crank Shaft, dia. of journals as per Rule 147 mm Mid. length breadth 435 mm Thickness parallel to axis 78 mm.
as fitted 155 mm Crank pin dia. 155 mm Crank Webs as per Rule 78 mm Thickness around eyehole as fitted.
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 20 mm.
as fitted Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication forced.
 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. Independent Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes.
 Lubricating Oil Pumps, No. and size 1 off - 6.5 m³/hour for each engine
 Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
 Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

AIR RECEIVERS:—Have they been made under Survey Yes. State No. of Report or Certificate 862.
 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 ✓.
 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 ✓
 EMERGENCY-Starting Air Receivers, No. 1 off Total cubic capacity 200 litres Internal diameter 380 mm thickness 11.0 mm
 Seamless, lap welded or riveted longitudinal joint lap welded Material P. M. Steel Range of tensile strength 28.7 Tm/2" Working pressure by Rules 37.8 kg/cm²

ELECTRIC GENERATORS:—Type drip proof, ventilated.
 Pressure of supply 220 volts. Full Load Current 1090 Amperes. Direct or Alternating Current direct.
 If alternating current system, state the periodicity ✓ Has the Automatic Governor been tested and found efficient when the whole 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.

LANDS. Are approved plans forwarded herewith for Shafting Yes. Receivers 2/2/1935 Separate Tanks ✓
 (If not, state date of approval)

PAIRE GEAR supplied as per Rules, - and in addition:-

- 3 Cylinders complete.
- 3 Pistons complete.
- 2 Sets of piston rings
- 2 Complete sets of valves for 1 cylinder
- 5 Fuel needle valves.

The foregoing is a correct description.

ARTIESELSKABET
 BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI

Manufacturer.



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012705-012710-0275

Dates of Survey while building	{	During progress of work in shops--}	2/1 - 7/1 - 10/1 - 4/4 - 8/5 - 12/5 - 15/5 - 23/5 - 9/6 - 13/6 - 19/6 - 21/6 - 22/6 - 7/7 - 28/8 - 4/9 - 6/9
		During erection on board vessel ---}	24/7 - 27/7 - 2/8 - 5/8 - 11/8 - 23/8 - 7/9 - 15/9 - 27/9 - 28/9 - 29/9 - 30/9 - 1/10 1939.
		Total No. of visits	30.

Dates of Examination of principal parts—Cylinders *with* Covers *19/6-22/6* Pistons *2/6* Piston rods *✓*

Connecting rods 2/1-7/1-10/1-15/6 Crank and Flywheel shafts 4/4-12/5-15/5-9/6 Intermediate shafts ☒

Crank and Flywheel shafts, Material S. M. Steel Identification Marks Lloyds No 4746-47-48. K.L. 9.6.39

Connect. rods
Intermediate chatts. Material S. M. Steel Identification Marks Hayai no 4532-37-38 L.J. / 5.6.39.

Identification marks on Air Receivers

C.V. 28. 8. 39.

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.)

The above generator sets have been constructed and fitted under special survey in accordance with the Society's Rules and the approved plans. The material has been tested & examined as per Rules and found satisfactory and the workmanship is of good description. The generator sets have been tested under working condition and found to work satisfactorily.

The amount of Fee	Rs. 800.00 :	When applied for, 13/10/1939
Travelling Expenses (if any)	Rs. 15.00 :	When received, 23/1/1940

21/2

L. L. L. L. *W. H. L. L.*
Surveyors to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Epn. J.E. 11024

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