

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 6612.

Date of writing Report 12/9 1917 When handed in at Local Office Stockholm Received at London Office 18 SEP 1917

No. in Reg. Book. 89472 Survey held at Eskilstuna and Lidingö Date, First Survey 18.9.46 Last Survey 23.8 19 47

on the Single Trip Screw vessel "VATNAJÖKULL" Number of Visits 4 Tons Gross 939 Net 466

Built at Lidingö By whom built A/B Lidingöverken Yard No. 5 When built 1947

Owners H.F. Jöklar Port belonging to Reykjavik

Oil Engines made at Eskilstuna By whom made A/B Bolinder-Munktell Engine 36716/18 Contract No. 36734/36 When made 1946

Generators made at Odense By whom made Thrige Gen. 239440/1 Contract No. 239440/1 When made 1946

No. of Sets 2 Engine Brake Horse Power 2 x 90 Nom. Horse Power as per Rule 2 x 23 Total Capacity of Generators 2 x 60 Kilowatts.

**OIL ENGINES, &c.**—Type of Engines Bolinder Type W7S32 2 or 4 stroke cycle 2 Single or double acting single  
Maximum pressure in cylinders 21 kg/cm<sup>2</sup> Diameter of cylinders 180 m/m Length of stroke 180 m/m No. of cylinders 3 No. of cranks 3  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 720 m/m Is there a bearing between each crank No  
Revolutions per minute 1000 Flywheel dia. 606 m/m Weight 120 kgs. Means of ignition Hot bulb Kind of fuel used Shell Solar  
Crank Shaft, dia. of journals 85 m/m Crank pin dia. 120 m/m Crank Webs 42 "shrunk Mid. length thickness 42 "shrunk Thickness parallel to axis - Thickness round eyehole -

Flywheel Shaft, diameter - Intermediate Shafts, diameter - Thickness of cylinder liners walls 8 m/m

Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication automatic

Are the cylinders fitted with safety valves to be fitted Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Exhaust pipes lagged

Cooling Water Pumps, No. 1 each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Silencers water cooled

Lubricating Oil Pumps, No. and size Lubrication is by automatic lubricators.

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 Cert. enclosed.

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. None 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. Two Total cubic capacity 2 x 30 litres Internal diameter 220 m/m thickness 5 m/m

Seamless, lap welded or riveted longitudinal joint Welded Material S.M. Steel Range of tensile strength 44.1-49.0 kg/mm<sup>2</sup> Working pressure by Rules 15 kg/cm<sup>2</sup>

**ELECTRIC GENERATORS:**—Type Drip-proof compound. Pressure of supply 220 volts. Full Load Current 2 x 273 Amperes. Direct or Alternating Current D.C.

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 Yes and do the results comply with the requirements Yes

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

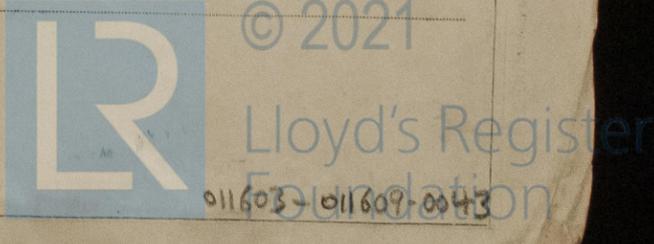
PLANS.—Are approved plans forwarded herewith for Shafting 9.7.38 Receivers - Separate Tanks -

SPARE GEAR As per Rule supplied.

*Replaced by general machine engine 10.68*

The foregoing is a correct description,

Aktiebolaget Bolinder-Munktell  
Försäljningsavdelningen  
*H. J. Jöklar* Manufacturer.



Dates of Survey while building { During progress of work in shops - - } 18.9.46.  
 { During erection on board vessel - - } 12.6.47, 20.7.47, 23.8.47.  
 Total No. of visits... 4

Dates of Examination of principal parts—Cylinders 18.9.46 Covers 18.9.46 Pistons 18.9.46 Piston rods -

Connecting rods 18.9.46 Crank and Flywheel shafts 18.9.46 Intermediate shafts -

Crank shaft { Material S.M. Steel Tensile strength 89.3 kg/mm<sup>2</sup>  
 { Elongation 20.0 % on 50 m/m Identification Marks LLOYD'S 4663 & 4675  
 TB 18.9.46.

Flywheel shaft, Material - Identification Marks -

Is this machinery duplicate of a previous case No Identification Marks -

Identification marks on Air Receivers See below.

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.)

These auxiliary engines have been constructed under Special Survey in accordance with the Rules, approved plans and the Secretary's letters. The workmanship and materials are good and test sheets in respect of the crankshafts are attached.

The engines have been securely fitted in the vessel under my inspection and to my satisfaction, tested under full power conditions and found in order.

**N.B.**

The cylinders of these auxiliary engines are not yet fitted with safety valves as required by the Rules. Messrs. Bolinder-Munktell state that these will be supplied at the first available opportunity. In the meantime it is recommended that the class should be made subject to these valves being fitted.

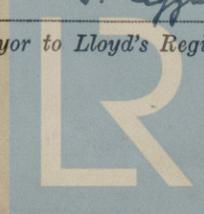
**Identification marks on air receivers:-**

No. 1288	No. 978
LLOYD'S TEST 30 KG.	LLOYD'S TEST 30 KG.
W.P. 15 KG.	W.P. 15 KG.
GA 12.1.45.	SJ 15.12.42.

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

Committee's Minute... **FRI. 24 OCT 1947**  
 Assigned *See F.E. mch. rpt.*

*M.B. Liggins*  
 Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

Im. 11.42.-T (MADE AND PRINTED IN ENGLAND). (The Surveyors are requested not to write on or below the space for Committee's Minute.)