

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 9660

20 AUG 1936

Received at London Office

Date of writing Report 15<sup>th</sup> July 1936 When handed in at Local Office 30<sup>th</sup> July 1936 Port of KobeNo. in Survey held at KOBE & OH. HARIMA Date, First Survey 9<sup>th</sup> Sep 1936 Last Survey 29<sup>th</sup> June 1936  
Reg. Book. Number of Visitson the <sup>Single</sup>~~Twin~~  
<sup>Triple</sup>~~Quadruple~~ Screw vessel KAGU MARU Tons { Gross 6807  
Net 3688

Built at OH. HARIMA By whom built HARIMASIE. CO. LTD. Yard No. 216 When built 1936

Owners KOKUSAI KISEN KAB. KAISHA Port belonging to TOKIO

Oil Engines made at KOBE By whom made KAWASAKI DOCKYARD CO. LTD. Contract No. When made 1936

Generators made at KOBE By whom made KAWASAKI DOCKYARD CO. LTD. Contract No. When made 1936

No. of Sets 3 Engine Brake Horse Power 234 Nom. Horse Power as per Rule Total Capacity of Generators 480 Kilowatts.

OIL ENGINES, &amp;c.—Type of Engines KAWASAKI MAN. G4V42 HEAVY OIL 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 49.5% Diameter of cylinders 285 mm Length of stroke 420 mm No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 328 mm Is there a bearing between each crank Yes

Revolutions per minute 380 Flywheel dia. 1,800 mm Weight 3,000 kg. Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 161 mm as fitted 170 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 280 mm Mid. length thickness 90 mm Thickness parallel to axis Thickness around eyehole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 18 mm

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 Yes

Cooling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size 1 on each engine gear type

Air Compressors, No. None No. of stages 1 Diameters 1 Stroke 1 Driven by 1

Scavenging Air Pumps, No. None Diameter 1 Stroke 1 Driven by 1

AIR RECEIVERS:—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 Steam

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. 1 Total cubic capacity 500 Litres Internal diameter 700 mm thickness 14 mm

Seamless, lap welded or riveted longitudinal joint R.R.D.B.S. Material Steel Range of tensile strength 44-50.5 mm<sup>2</sup> Working pressure by Rules 30.5 kg/cm<sup>2</sup>

ELECTRIC GENERATORS:—Type Compound wound D.C.

Pressure of supply 225 volts. Load 2130 (Total) Amperes. Direct or Alternating Current D.C.

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes are they compound wound Yes

are they over compounded 5 per cent. See letter, if not compound wound state distance between each generator

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

PLANS. Are approved plans forwarded herewith for Shafting 22-11-34 Receivers 10-6-35 Separate Tanks 20-8-35  
(If not, state date of approval) (Same as KASHIMARU)

## SPARE GEAR

The spare gear is in accordance with the requirements of the Rules with the following important additional items:

2 Cylinder covers complete with valves, springs &amp; other fittings,

2 pistons complete with rings &amp; gudgeon pins,

1 cam shaft driving gear wheel,

1 set of coupling bolts for flywheel coupling.

The foregoing is a correct description,

Manufacturer.

THE HARIMA SHIP-BUILDING  
AND ENGINEERING CO., LTD.

18-7-36

MANAGING DIRECTOR.

008344-008353-0081



Dates of Survey while building  
During progress of work in shops - 1935 May 6, July 20, 24, 27, Aug. 31, Sept. 4, 25, Oct. 29, 10, 11, 12, 14, 19, 22, 26, 28, 29, 30. Dec. 9, 11, 14, 24, 27.  
1936 Jan. 18, 21, 30, Feb. 8, 14, 27, March 6, 7, 10.  
During erection on board vessel - 1936 April 14, May 12, June 1, 20, 29.  
Total No. of visits 39

Dates of Examination of principal parts—Cylinders 18-1-36 Covers 30-1-36 Pistons 9-12-35 Piston rods ✓

Connecting rods 9-12-35 Crank and Flywheel shaft 27-12-35 Intermediate shaft ✓

Crank and Flywheel shaft, Material F.S.M.S. Identification Mark 4420 Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel KIWIGASA MARU

General Remarks (State quality of workmanship, opinions as to class, &c.)

Each engine was constructed under Special Survey in accordance with the Rules & approved plans.

The workmanship & material are good.

On completion, the engines & generators were installed in the vessel in accordance with the Rules & tried under full working conditions with satisfactory results.

The above is in accordance with the requirements of the Rules with the following exceptions:  
1. The main engine is of the compound type.  
2. The main engine is of the compound type.  
3. The main engine is of the compound type.

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

For C. Macpherson & self  
Glamada  
Assistant Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 25 AUG 1936

Assigned See minute on 26. Rpt.



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