

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 8981

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

11 APR 1935

No. in Survey held at
Reg. Book.

KOBE.

Date, First Survey

10-3-34.

Last Survey

7-2-1935

Number of Visits

43.

Single
on the ~~Twin~~
Triple
Quadruple } Screw vessel

"KONGO MARU."

Tons { Gross 7061.
Net 3761.

Built at HARIMA.

By whom built HARIMA S.B. & ENG CO. LD.

Yard No. 205. When built 1935.

Owners KOKUSAI KISEN KABUSHIKI KAISHA.

Port belonging to TOKIO.

Oil Engines made at KOBE.

By whom made KAWASAKI DOCKYARD CO. LTD.

Contract No. 1600. When made 1935.

Generators made at KOBE.

By whom made KAWASAKI DOCKYARD CO. LTD.

Contract No. 1600. When made 1935.

No. of Sets 3

Engine Brake Horse Power 493.

Nom. Horse Power as per Rule 98.

Total Capacity of Generators 990 Kilowatts.

OIL ENGINES, &c.—Type of Engines

M.A.N.

2 or 4 stroke cycle 4 Single or double acting SINGLE.

Maximum pressure in cylinders 49 kg/cm².

Diameter of cylinders 285 mm.

Length of stroke 420 mm.

No. of cylinders 8.

No. of cranks 8.

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 370.

Flywheel dia. 1700 mm.

Weight 1770 kg.

Means of ignition COMPRESSION

Kind of fuel used HEAVY OIL.

Crank Shaft, dia. of journals

as per Rule 167.3 mm.

as fitted 170 mm.

Crank pin dia. 170 mm.

Crank Webs

Mid. length breadth 280 mm.

Thickness parallel to axis.

Mid. length thickness 90 mm.

Thickness around eye hole.

Flywheel Shaft, diameter

as per Rule

Intermediate Shafts, diameter

as per Rule

Thickness of cylinder liners 20 mm.

Is a governor or other arrangement fitted to prevent racing of the engine when started YES.

Means of lubrication

forced lub.

Are the cylinders fitted with safety valves YES.

Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

water cooled.

Cooling Water Pumps, No. 3 AUXILIARY.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

YES.

Lubricating Oil Pumps, No. and size

ONE GEAR PUMP ON EACH ENGINE.

Air Compressors, No. 2.

No. of stages 2.

Diameters 240 x 310 mm.

Stroke

180 mm.

ELECTRIC MOTOR.

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by AUXILIARY GENERATOR.

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.

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

600 LITRE.

Internal diameter

800 mm.

thickness

5/8.

Seamless, lap welded or riveted longitudinal joint

RIVETED.

Material

STEEL.

Range of tensile strength

28-32 T/D.

Working pressure by Rules

30 kg.

ELECTRIC GENERATORS:—Type Drip proof self ventilating Compound Wound.

Pressure of supply 225 volts.

Load

1465 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.

yes

, 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

26.10.33.

Receivers

10.5.34.

Separate Tanks

14.4.33.

(If not, state date of approval)

SPARE GEAR

3. CYLINDER COVERS COMPLETE WITH VALVES.

4 SETS.

CRANK PIN BEARING BOLTS.

4 SETS.

INLET VALVES.

3. CYLINDER LINERS.

4 SETS.

MAIN BEARING BOLTS.

8 LENGTHS

FUEL PIPES.

4 SETS. CYLINDER COVER STUDS & NUTS.

4 SETS.

FUEL CAMS COMPLETE.

20 SETS. PISTON RINGS.

8 SETS.

FUEL PUMPS COMPLETE.

4 SETS. TOP & BOTTOM END BRASSES.

4 SETS.

SAFETY VALVES.

3. GUDGEON PINS.

24 SETS.

NEEDLE VALVES.

3 SETS. PISTONS.

4 SETS.

STARTING VALVES.

4 SETS. CONNECTING ROD BOLTS.

8 SETS.

EXHAUST VALVES.

The foregoing is a correct description

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

M. Hirota

Manufacturer.

for DIRECTOR.



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Lloyd's Register
Foundation

010502-010508-0100

Dates of Survey while building { During progress of work in shops - - MAR/34. 10. JUN/34. 19. SEP/34. 20. 22. 27. OCT/34. 1. 5. 10. 11. 12. 16. 19. 22. 23. 24. 25. 26. 30. NOV/34. 1. 5. 6. 10. 12. 14. 15. 16. 19. 21. 22. 24.
 During erection on board vessel - - DEC/34. 12. 21. 22. 24. 27. 28. JAN/35. 10. FEB/35. 7.
 DEC/34. 3. JAN/35. 21. 28. FEB/35. 21. 25.
 Total No. of visits

Dates of Examination of principal parts—Cylinders 14-11-34. Covers 14-11-34. Pistons 21-11-34. Piston rods 24-10-34.

Connecting rods 1-11-34. Crank and Flywheel shaft 1. 3. 9-3-34 19-6-34 11-10-34. Intermediate shaft 1.

Crank and Flywheel shaft, Material STEEL. Identification Mark LR No 3970 } 3971 } 3972 } Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case NO. If so, state name of vessel ✓.

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

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

The workmanship and materials are good.

On completion the engines and generators were efficiently installed in the vessel and tried under full working conditions with satisfactory results, and eligible in our opinion for the record of "ELECTRIC LIGHT".

Rpt. 13.

RE

Date of writ

No. in Reg. Book

Built at

Owners

Electric L

Is the Vessel

System of

Pressure of s

Direct or Al

If alternating

Has the Auto

Generators,

are they over co

Where more tha

series with each

Are all terminals

short circuited, o

Position of Ge

is the ventilation

if situated near

are their axes of

Earthing, are th

their respective ge

Main Switch Bo

a fuse on each insu

Switchboards, a

are they protected fr

woodwork or other c

are they constructed

permanently high ins

with mica or micanit

and is the frame effec

YES.

bars YES.

Main Switchgear,

HAS A TRIPLE POL

OUTGOING CIRCUIT

Instruments on mai

Earth Testing, state

SWITCH ON EACH

Switches, Circuit B

Joint Boxes Section

1m. 7.30—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 61 : 5 - 0
 Travelling Expenses (if any) £ : :
 When applied for, 19/2/1935
 When received, 22/2/1935

Committee's Minute
 Assigned
 See Kob J.E. 8987

FRI. 17 MAY 1935
 FRI. 20 SEP 1935

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