

Rpt. 4c. -A

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

London

No. ~~141~~Date of writing Report 20-3-53 (Yokohama)  
30-4-1953

When handed in at Local Office 30 JUN 1953

Received at London Office

9 JUL 1953

No. in  
Reg. Book.

Survey held at

Shimizu &amp; Nagoya, Japan

Port of

Yokohama + Kobe

Date, First Survey

8-7-52

Last Survey

24-11-52 (Yokohama)

Number of Visits

27

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

T.M.V. "NEW YORK MARU"

Built at

Nagoya Japan

By whom built

Nagoya Shipbuilding Co. Ltd.

Yard No. 104

Tons

Gross 7738.79

Net 4429.84

When built

April 1953

Owners

Toho Kaiun K.K.

Port belonging to

Tokyo

Oil Engines made at

Shimizu Japan

By whom made

Ito Engineering Co., Ltd.

ENR

4065

When made 11-52

Generators made at

Kawasaki Japan

By whom made

Fuji Electric Mfg. Co., Ltd.

Contract No.

4066

313670A

Contract No. 313671A

When made 10-52

No. of Sets

2

Engine Brake Horse Power

450 x 2

M.N. as per Rule

90 x 2

Total Capacity of Generators

330 x 2

KVA

Kilowatts

Is Set intended for essential services

yes

## OIL ENGINES, &amp;c.—Type of Engines

4 SC SA

Trunk piston

2 or 4 stroke cycle

4

Single or double acting

Single

Maximum pressure in cylinders

46 kg/cm<sup>2</sup>

Diameter of cylinders

275 mm

Length of stroke

400 mm

No. of cylinders

8

No. of cranks

8

Mean indicated pressure

6.42 kg/cm<sup>2</sup>

Firing order in cylinders

1-3-5-7-8-6-4-2

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

318 mm

Is there a bearing between each crank

yes

Moment of inertia of flywheel (+6 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)1.157 x 10<sup>7</sup>

Revolutions per minute

400

Flywheel dia

1600 mm

Weight

3050 kg

Means of ignition

Compression

Kind of fuel used

Diesel oil

Crank Shaft, dia. of journals

as per Rule 161.4 mm

as fitted 190

Crank pin dia

174 mm

Crank Webs

Mid. length breadth 280 mm

Mid. length thickness 80

shrunk

Thickness parallel to axis

-

Thickness round eyehole

-

Flywheel Shaft, diameter

as per Rule -

as fitted -

Intermediate Shafts, diameter

as per Rule -

as fitted -

General armature, moment of inertia (+6 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)2.35 x 10<sup>6</sup>

Are means provided to prevent racing of the engine when declutched

yes

Means of lubrication

Forced

Kind of damper if fitted

No

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.

1

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

Lubricating Oil Pumps, No. and size

1

19 HP/Hour

Air Compressors, No.

2

No. of stages

2

Diameters

HP 310 mm

LP 340 "

Stroke 180 mm

Driven by 450 HP Diesel engine

Scavenging Air Pumps, No.

-

Diameter

Stroke

Driven by

## AIR RECEIVERS:—Have they been made under Survey

yes

State No. of Report or Certificate

400L M902

120L M901

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

Hand holes

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.

2

Total cubic capacity

400L x 30 kg/cm<sup>2</sup>

Internal diameter

600 mm

Shell pl. end pl.

16 mm 22 &amp; 19 mm

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

O.H. steel

Range of tensile strength

400L (57.3, 52.1, 47.1) 3 mm

Working pressure by Rules

30 kg/cm<sup>2</sup>

## ELECTRIC GENERATORS:—Type

Semi Enclosed drip proof 3 phase synchronous

Pressure of supply

225 volts

Full Load Current

847

Amperes

Direct or Alternating Current

AC

If alternating current system, state the periodicity

60

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

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

PLANS.—Are approved plans forwarded herewith for Shafting

19-8-52

Receivers

12-11-52

Separate Tanks

21-6-52

Have Torsional Vibration characteristics if applicable been approved

23-2-53

Armature shaft Drawing No. M322266 a

SPARE GEAR Main bearing - 8 sets cylinder covers complete - 1 set cyl. liners - 2 sets Fuel injection valve complete - 7 sets

Exhaust valve complete - 8 sets Suction valve complete - 4 sets starting valve complete - 2 sets cylinder safety valve - 3 sets

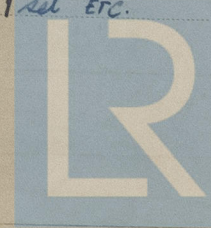
piston complete - 1 set piston ring - 32 piston pin - 1 set connecting rod - 1 set crank pin brass - 3 sets

Fuel pump complete - 2 sets Fuel injection pipe - 8 cooling water pump shaft and impeller - 1 set etc.

The foregoing is a correct description,

T. Kanazawa. Deputy of Chief engineer. Manufacturer.

Ito Engineering Co., Ltd.



© 2021

Lloyd's Register  
Foundation

013596-013603-0181



Dates of Survey while building  
During progress of work in shops--  
During erection on board vessel--  
Total No. of visits

1952 JUL. 8. 19 AUG. 28 SEP 2 OCT 16  
1953 FEB 4. 5 MAR 9. 10. 31 APR 2. 3. 4  
15 (Yokohama) + 12 (Kobe) Total 27

Dates of Examination of principal parts—Cylinders 8-7-52  
Covers 6-8-52 Pistons 20-11-52 Piston rods —  
Connecting rods 25-8-52 (Kobe) 28-8-52 (Kobe)  
2-9-52 ( " ) Crank and Flywheel shafts 16-10-52 ( " ) Intermediate shafts —

Crank shaft: Material O. H. Steel  
Tensile strength T 32 3/8" B 32.8 7/8"  
T 33% B 34% T 35.1 B 35.1  
Elongation T 32.5 B 34 No. MDCK 113 AM LR 28-8-52  
Identification Marks No. MDCK 114 YK LR 16-10-52

Flywheel shaft, Material — Identification Marks —

Identification marks on Air Receivers  
400 L NO. 10439 LLOYD'S TEST 45 KG WP 30 KG HT 9-12-52  
120 L NO. 10440 LLOYD'S TEST 33.5 KG WP 20 KG HT 9-12-53

Is this machinery duplicate of a previous case yes If so, state name of vessel T. M. V. "YOKOHAMA MARU"

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

These Electric generator sets have been constructed under Special Survey in accordance with the Rules, Approved plans and Secretary's letters.  
The materials and workmanship are good.  
These Electric generator sets have been examined under full power working condition in the shop and found satisfactory.  
It is submitted that these Electric Generating sets are eligible to be classed with this Society with the notation of +LMC when satisfactorily installed in the vessel.  
These engines have been installed on board the T. M. V. "NEW YORK MARU" and examined under full working condition & found satisfactory.

During Construction  
The amount of Fee... £ 124,000.-  
Travelling Expenses (if any) £ : :  
When applied for 19  
When received 19  
Surveyor to Lloyd's Register of Shipping.  
FRIDAY 28 AUG 1953  
Assigned Su F. E. mshy. rpt.