

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 15115.

20 MAY 1953

14 AUG 1952

Received at London Office

MANCHESTER.

12th August, 1952.

Port of

Writing Report 23rd July, 1952.

When handed in at Local Office

Survey held at REDDISH, Nr. STOCKPORT.

Date, First Survey 29th April, 1952.

Last Survey 8th July, 1952.

Number of Visits 5

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

CLASSED VESSEL.

Rover

Tons { Gross  
Net

Leith

By whom built Henry Robb & Co.,

Yard No. 416.E When built 1952.

Manchester Ship Canal Co. Ltd.,

Port belonging to Manchester.

Engine No. 145555/6.

Contract No. 17827.

When made 1952.

Reddish.

By whom made Crossley Bros. Ltd.,

Generator

Contract No. 47378.

When made 1952.

Liverpool.

By whom made Campbell & Isherwood Ltd.,

Total Capacity of Generators 26. Kilowatts.

Engine Brake Horse Power 42 x 2.

M.N. as per Rule

8.4 x 2.

intended for essential services. Yes.

ENGINES, &c.—Type of Engines Vertical Solid Injection Heavy Oil BW3. 2 or 4 stroke cycle 4. Single or double acting Single.

num pressure in cylinders 850 lbs/sq. inch.

Diameter of cylinders 5".

Length of stroke 6 1/2".

No. of cylinders 3 x 2.

No. of cranks 3 x 2.

indicated 121 lbs/sq. inch.

Firing order in cylinders 1, 3, 2.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 3/8" & 12 5/8"

pressure

121,400.

Revolutions per minute 1,000.

are a bearing between each crank

No.

Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

121,400.

Revolutions per minute 1,000.

heel dia 24".

Weight

460 lbs.

Means of ignition

Compression.

Kind of fuel used Diesel Oil.

as per Rule

Approved.

Mid. length breadth 4 1/2".

Thickness parallel to axis

on Charack Shaft, dia. of journals

as fitted 3 1/2".

Crank pin dia 3 1/2".

Crank Webs

1.13/16" shrunk

Mid. length thickness

Thickness round eye-hole

heel Shaft, diameter

as per Rule

Intermediate Shafts, diameter

as per Rule

General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

means provided to prevent racing of the engine when declutched.

Yes.

Means of lubrication Forced.

Kind of damper if fitted

Watercooled.

the cylinders fitted with safety valves.

No.

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

ing Water Pumps, No. One - 720 G.P.H. on each engine.

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

icating Oil Pumps, No. and size 1 - 150 G.P.H. on each engine.

Compressors, No.

No. of stages

Diameters

Stroke

Driven by

enging Air Pumps, No.

Diameter

Stroke

Driven by

RECEIVERS:—Have they been made under Survey (not supplied by Engine Builders). State No. of Report or Certificate

ch receiver, which can be isolated, fitted with a safety valve as per Rule.

the internal surfaces of the receivers be examined.

What means are provided for cleaning their inner surfaces.

ere a drain arrangement fitted at the lowest part of each receiver.

Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

less, lap welded or riveted longitudinal joint.

Material

Range of tensile strength

Working pressure by Rules

ing Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

less, lap welded or riveted longitudinal joint.

Material

Range of tensile strength

Working pressure by Rules

ELECTRIC GENERATORS:—Type Enclosed, Ventilated, Drip Proof, Compound Wound, Continuous Rating.

rd No. 662

sure of supply

110

volts.

Full Load Current

236.

Amperes.

Direct or Alternating Current

Direct.

under Alternating current system, state the periodicity. Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

and Required off

Yes.

Generators, are they compounded as per Rule.

Yes.

is an adjustable regulating resistance fitted in series with each shunt field.

Yes.

full load all terminals accessible, clearly marked, and furnished with sockets.

Yes.

Are they so spaced

the Shaft

shielded that they cannot be accidentally earthed, short circuited, or touched.

Yes.

Are the lubricating arrangements of the generators as per Rule.

Yes.

nor be the generators are under 100 kw. full load rating, have the makers supplied certificates of test.

and do the results comply with the requirements.

his effect

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

See Liverpool Report 10 No. C.7806 attached.

these en

ails of driven machinery other than generator.

pose inter

ANS.—Are approved plans forwarded herewith for Shafting.

18.7.50.

Receivers.

Separate Tanks.

be Torsional Vibration characteristics if applicable been approved.

Not applicable.

Armature shaft Drawing No.

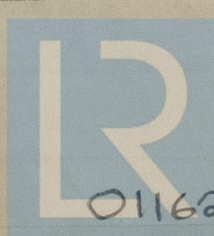
ARE GEAR

AS PER RULE REQUIREMENTS.

The foregoing is a correct description.

CROSLEY BROTHERS LIMITED

Manufacturer.



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Lloyd's Register

Foundation

011628-011635-0067



Dates of Survey while building  
During progress of work in shops - 1952. April 29th, May 1st, 26th July, 7th and 8th.  
During erection on board vessel -  
Total No. of visits

Dates of Examination of principal parts - Cylinders 1.5.52. Covers 1.5.52. Pistons 1.5.52. Liners 29.4.52.  
M.377 1.5.52. Piston rods 29.4.52.  
Connecting rods 1.2.52. Crank and Flywheel shafts 23.1.52. Intermediate shafts 25.5.52.  
1.2.52.  
Crank shaft Material O.H. Steel Tensile strength 45.6 48.0  
Elongation 26% 27% Identification Marks Lloyd's J.4827 Lloyd's J.5333  
Flywheel shaft, Material 303 Identification Marks R.J.Y. W.D. R.J.Y. L.V.H.  
Identification marks on Air Receivers 23.1.52. 25.5.52.

Is this machinery duplicate of a previous case Yes If so, state name of vessel Henry Robb Yard No. 41VE

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under spec survey of tested materials in accordance with the Secretary's letters approved plans and Requirements of the Rules. The materials and workmanship are good and on completion the combined set of two engines and a generator on a fabricated base was tested in the shop under full load conditions each engine running for 4 hours on full load followed by one hour on 10% overload coupled to the generator through friction clutches and showed satisfactory results.

In our opinion this machinery is suitable for installation in a vessel to be classed by the Society for the purpose intended.

Attached hereto:- Liverpool Rpt. 10 No. G.7806 covering generator.

Sheffield Rpt. 6 No. 54271 covering Crankshafts.

" " " " 56042.

These engines have now been efficiently installed on board and tested under full working conditions with satisfactory results

The amount of Fee ... £ 10 : 0 : 0

When applied for 12/8/52 19

Travelling Expenses (if any) £ 1 : 5 : 0

When received 19

Committee's Minute

GLASGOW

19 MAY 1953

Assigned

SEE ACCOMPANYING MACHINERY REPORT

Surveyor to Lloyd's Register of Shipping  
For & on behalf of R.J. Yorston  
A.H. Duckworth

Thomas Donaldson

Lloyd's Register Foundation