

Report No. 16680

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office 17 JUN 1955

Date of writing Report 9th June 1955

When handed in at Local Office 19

Port of MANCHESTER

Survey held at Hazel Grove

Date, First Survey 2nd March, 1955

Last Survey 25th May, 1955

on the Twin Screw vessel Stock engine for Hall Lines Ltd., City of Carlisle

Number of Visits 9

Tons Gross Net

By whom built

Yard No.

When built

Port belonging to

Engines made at Hazel Grove

By whom made Mirrlees, Bickerton & Day Ltd.,

Engine No. 47421

When made 1955

Generators made at

By whom made

Generator No.

When made

of Sets One

B.H.P. of each Set 295 Cont. M.N. as per Rule 59

Capacity of each Generator - Kilowatts.

Let intended for essential services

Engines, &c.—Type of Engines T16 Heavy Oil

3 or 4 stroke cycle 4

Single or double acting Single

Maximum pressure in cylinders 800 PSI

Diameter of cylinders 8 1/2"

Length of stroke 13"

No. of cylinders 6

No. of cranks 6

Indicated pressure 112 PSI

Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 8 5/8"

Where a bearing between each crank Yes

Moment of inertia of flywheel 476

Revolutions per minute 600

Wheel dia. 2' 9 1/2"

Weight 1020 lbs

Means of ignition Compression

Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule 5 3/4"

Crank pin dia. 5.9/16"

Crank Webs Mid. length breadth 9 1/4"

Thickness parallel to axis shrunk

Wheel Shaft, diameter as per Rule 1b. in sec 2 585

Generator armature, moment of inertia 585

Means provided to prevent racing of the engine Yes

Means of lubrication Forced

Kind of damper if fitted -

Are the cylinders fitted with safety valves Yes

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

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

Lubricating Oil Pumps, No. and size One - 800 G.P.H. at 600 R.P.M.

Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Engining Air Pumps or Blowers, No.

How driven

RECEIVERS:—Have they been made under Survey -

State No. of Report or Certificate

Are the internal surfaces of the receivers be examined and cleaned

Are there 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

Engining Air Receivers, No.

Total cubic capacity

Internal diameter

Thickness

Less, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

ELECTRIC GENERATORS:—Type -

Voltage of supply volts. Full Load Current Amperes. Direct or Alternating Current

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

Generators, are they compounded as per Rule is an adjustable regulating resistance fitted in series with each shunt field

Are all terminals accessible, clearly marked, and furnished with sockets. Are they so spaced

Are the generators so spaced that they cannot be accidentally earthed, short circuited, or touched. Are the lubricating arrangements of the generators as per Rule

Are generators under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

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

Are there any other driven machinery other than generator

VS.—Are approved plans forwarded herewith for Shafting 6.6.55. Receivers. Separate Tanks

Torsional Vibration characteristics if applicable been approved Armature shaft Drawing No.

Are there any spare gear required by the Rules been supplied

The foregoing is a correct description,

W. S. H. Smith

Manufacturer.



© 2021
Lloyd's Register
Foundation
011800-011804-0258

Dates of Survey while building { During progress of work in shops - - } 1955. Mar. 2, 30. May. 2, 13, 18, 19, 23, 24, 25.
{ During erection on board vessel - - }
Total No. of visits

Dates of Examination of principal parts - Cylinders 2.3.55. 30.3.55. 18.5.55. Covers 19.5.55. Pistons - Piston rods -

Connecting rods 2.5.55. Crank and Flywheel shafts Intermediate shafts

Crank shaft { Material S.M. Steel. Tensile strength 40.4 T.P.I.
Elongation 26.0, 28.0 on 2" Identification Marks GCX 6604 LR 644 LVH 13.5.55.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

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.) This heavy oil engine has been built under Special Survey of tested materials and in accordance with the Secretary's letters, approved plans and Rule requirements. The material is sound and free from defects. The workmanship is good.

The engine, direct coupled to a dynamatic dynamometer, was successfully tested at the Engine Builders' Works under the following conditions of loading - 6 hours 100% engine rating, one hour 10% overload, Governor trials. Crankcase explosion devices are fitted.

It is stated that frequency tables will be submitted when the engine is eventually installed in a vessel to replace a similar engine previously supplied to Hall Lines Ltd.

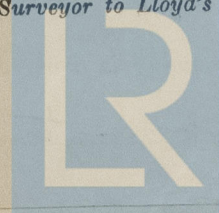
Attached hereto:- Shaft Cert. No. F.169.

3m. 551.-T. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... £ 22 :- : - { When applied for 16 6 19 55-9
Travelling Expenses (if any) £ 1, : 15 : - { When received 19

Committee's Minute
Assigned

L. V. Hansel
Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation