

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 15406

2nd February, 1953. 10th March, 1953. Received at London Office.
 Date of writing Report 19 When handed in at Local Office 19 Port of MANCHESTER.

No. in Survey held at Ashton-under-Lyne. Date, First Survey 7th July, 1952. Last Survey 30th January, 1953.
 Reg. Book. M.V. SILVERBROOK. Number of Visits 4

Single on the Twin Triple Quadruple Screw vessel. Classed Vessel. Tons Gross Net.

built at By whom built Smith's Dock. Yard No. EW.1225 When built
 Ordered by The Sunderland Forge & Engineering Co. Ltd., O/N.25/646/7/8
 Port belonging to

Oil Engines made at Ashton-u-Lyne By whom made National Gas & O.E. Co. Ltd. Engine No. 90187 When made 1952/3
 Generators made at Sunderland By whom made Sunderland Forge & Eng. Co. Generator No. 45242 When made 1953
 No. of Sets 1 B.H.P. of each Set 82 M.N. as per Rule 20 Capacity of each Generator 35 Kilowatts.
 Set intended for essential services Auxiliary Machinery.

OIL ENGINES, &c.—Type of Engines "M43" type National 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 95.0 lbs/sq. in. Diameter of cylinders 6" Length of stroke 8 1/2" No. of cylinders 3 No. of cranks 3
 Mean indicated pressure 107 lbs/sq. in. Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 6 7/8"
 there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 46190 lbs.in²
 " " " balance wts. " " " 4 off 750 lbs.in² Revolutions per minute 1000
 Flywheel dia 28" Weight 508 lbs. Means of ignition Compression Kind of fuel used Diesel
 Crank Shaft, Solid forged dia. of journals as per Rule Approved with 2 1/4" dia. hole slightly offset
 Semi-built as fitted 5.3095 Crank pin dia 4.497" Crank Webs Mid. length thickness 1 1/2" Thickness parallel to axis
 All-built as fitted 5.3095 Mid. length thickness 1 1/2" Thickness round eye-hole
 Flywheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m² or Kg.-cm.²) 8000 lbs. in²

Means provided to prevent racing of the engine Forced Means of lubrication Forced Kind of damper if fitted
 Are the cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Water Cooled
 One Centrifugal manifolds.
 Cooling Water Pumps, No. and how driven Gear Driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel
 Lubricating Oil Pumps, No. and size One Gear Type - 365 Gallons per hour.

Compressors, No. No. of stages Diameters Stroke Driven by
 Ventilating Air Pumps or Blowers, No. How driven

AIR RECEIVERS:—Have they been made under Survey None supplied State No. of Report or Certificate
 (other than main engines)
 1930 State full details of safety devices

Are the internal surfaces of the receivers be examined and cleaned
 Is there a drain arrangement fitted at the lowest part of each receiver.

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
 Starting Air Receivers, No. Total cubic capacity Internal diameter thickness
 Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure

ELECTRIC GENERATORS:—Type Sunderland Forge D.P.
 Pressure of supply 110 volts. Full Load Current 318 Amperes. Direct or Alternating Current D.C.
 Is an alternating current system, state the periodicity 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 Yes
 Are all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced
 shielded that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule Yes
 Are the generators under 100 kw. full load rating, have the makers supplied certificates of test Yes and do the results comply with the requirements Yes
 Are the generators 100 kw. or over have they been built and tested under survey

Details of driven machinery other than generator Consolidated Air Compressor No. 390840 Supplied by Messrs. Sunderland
 Revised 26th Feb. 1953. Forge Co. Ltd.

PLANS.—Are approved plans forwarded herewith for Shafting 9th Nov. 1951. Receivers Separate Tanks
 (If not, state date of approval)
 Have Torsional Vibration characteristics if applicable been approved Not applicable Armature shaft Drawing No.
 (State date of approval and name of previous duplicate case, if any)
 Is the spare gear required by the Rules been supplied In accordance with Rule Requirements.

The foregoing is a correct description,

THE NATIONAL GAS AND OIL ENGINE Co. Ltd.

Manufacturer.



© 2020

Lloyd's Register Foundation

004206-004212-0049

Dates of Survey while building { During progress of work in shops - - 1952. July 7th, August 6th, 27th. 1953. January 30th. During erection on board vessel - - - - - Total No. of visits - - - - -

Dates of Examination of principal parts { Column. 6.8.52. Covers 27.8.52. Pistons 27.8.52. Liners 7.7.52. Cylinders 6.8.52. Piston rods 7.7.52.

Connecting rods 27.8.52. Crank and Flywheel shafts Intermediate shafts

Crank shaft { Material S.M. Steel. Tensile strength 42.4 Tons per sq. in. Elongation 24% Identification Marks LLOYD'S 2130 10.12.51. WJI. 4.3.52.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers NONE SUPPLIED.

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.) The engine has been constructed under special survey of tested materials and in accordance with the Secretary's letters and Rule Requirements.

The materials and workmanship are good. On completion of erection, the engine direct coupled to its generator, the unit mounted on a baseplate, was tested under the following conditions of loading.

4 hours full engine load.

1 hour 125% full engine load.

1/2 hour 75% engine load.

1/2 hour 50% engine load.

Governor tried and found satisfactory.

~~Excessive vibration observed during test at 750 r.p.m.~~

The Generator set is in my opinion suitable to be installed in a vessel classed with the Society for the purpose intended.

ATTACHED HERETO:-

Extract copy of Nottingham Report No. F. 2322 - covering the Crankshaft.

(Generator Manufacturer's Test Sheet).

Air Compressor Manufacturer's Test Sheet.

The amount of Fee ... £ 8 : 4s : 0d. When applied for 19

Travelling Expenses (if any) £ 2 : 0 : 0 When received 19

Committee's Minute

Assigned See F.E. survey report.

Rpt. 13.

Date of writ

No. in Reg. Book.

95983

Built at

Owners

Installation

Is vessel eq

Plans, have

Heating

Prime Mov

with a trip

Are the gen

Have mach

under 100

genera

is the vent

damage fr

genera

are they in

steam and

material is

per Rule

for each ge

Overloa

equalize

and the su

Knife

Are compa

ammeters

protection

complid

Switches,

make of fu

overload d

devices op

if otherwis

under max

Are all th

damage

type of cab

and laundr

to with

port side

chaired

Are all lea

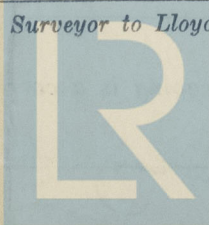
bulkheads

effectively

Have refri

Are the m

Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation