

RECEIVED

21 MAY 1951

LIVERPOOL FERRY No. 133852

## Rpt. IN D.O. REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 14578.

Date of writing Report 11th April, 1951. When handed in at Local Office 16th May 1951. Port of MANCHESTER. Received at London Office 17 MAY 1951

No. in Survey held at MANCHESTER. Date, First Survey 13.10.50. Last Survey 10.3. 1951.

Reg. Book. Single on the Twin Screw vessel Presidente Peru Number of Visits 9.

Triple Quadruple

Built at Birkenhead. By whom built Cammell Laird & Co. Yard No. 1205 When built 1951

Owners Argentine Govt. Port belonging to Argentine

Oil Engines made at Ashton-U-Lyne. By whom made National Gas & O.E. Co. Ltd. Engine 65634/5. When made 1950

Generators made at Sunderland. By whom made Sunderland Forge & Eng. Co. Generator 42213/4. When made 1951

No. of Sets 2 Engine Brake Horse Power 150 x 2 M.N. as per Rule 75 Total Capacity of Generators 75 x 2 Kilowatts 150

Total 300

Is Set intended for essential services Yes.

OIL ENGINES, &c.—Type of Engines R4A type Vertical Heavy Oil. 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 850 lbs/sq.inch. Diameter of cylinders 9" Length of stroke 12" No. of cylinders 4. No. of cranks 4.

Mean indicated pressure 92 lbs/sq.inch. Firing order in cylinders 1-3-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 10 1/2"

Is there a bearing between each crank Yes. Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 1440000 lb in<sup>2</sup> Revolutions per minute 500.

Flywheel dia. 4'-3 1/2" Weight 3260 lbs. Means of ignition Compression. Kind of fuel used Diesel.

Crank Shaft, dia. of journals as per Rule. 6.622 Crank pin dia. 6.372 Crank Webs Mid. length breadth. 7 3/4" Thickness parallel to axis shrunk

Flywheel 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>) 89500 lbs in<sup>2</sup>

Are means provided to prevent racing of the engine when declutched - 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 Watercooled.

Cooling Water Pumps, No. One - Centrifugal - 2,500 G.P.H. 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, engine driven - 360 G.P.H.

Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

AIR RECEIVERS:—Have they been made under Survey Yes. State No. of Report or Certificate C.16005/6.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule -

Can the internal surfaces of the receivers be examined - What means are provided for cleaning their inner surfaces -

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 by Rules -

Starting Air Receivers, No. 2 Total cubic capacity 22 cu. ft. Internal diameter 19" Plate 7/16" thickness 5/16" Ends 350 lbs

Seamless, lap welded or riveted longitudinal joint Riveted. Material M.S. Range of tensile strength 28/32 Working pressure by Rules -

ELECTRIC GENERATORS:—Type Open Type, drip proof, compound wound.

Pressure of supply 220 volts. Full Load Current 341. Amperes. Direct or Alternating Current Direct.

If 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 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 Yes. and do the results comply with the requirements Yes.

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

Details of driven machinery other than generator -

PLANS.—Are approved plans forwarded herewith for Shafting 27.7.49. Receivers 11.1.49. Separate Tanks -

(If not, state date of approval)

Have Torsional Vibration characteristics if applicable been approved 27.7.49. Armature shaft Drawing No. -

(state date of approval)

SPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description, and the particulars of the installation as fitted are as approved for Torsional Vibration Characteristics.

Skinner Manufacturer.

THE NATIONAL GAS AND OIL ENGINE Co. Ltd.

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