

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13840.

RECEIVED

OCT 1949

13th September, 49. 29th September, 49. Received at London Office 30 SEP 1949

Port of MANCHESTER. When handed in at Local Office 19. 49. Date, First Survey 6th May, 1949. Last Survey 31st August, 19. 49.

No. in Survey held at REDDISH. Reg. Book. Number of Visits 5.

on the Single Screw vessel BOSTON SWALLOW Dons Gross Net.

Built at Lowestoft. By whom built Messrs. Richard Ironworks Ltd., Yard No. 385. When built 1949.

Owners Boston Deep Sea Fishing & Ice Co. Ltd., Port belonging to.

Oil Engines made at Reddish. By whom made Messrs. Crossley Bros. Ltd. Contract No. 17257. When made 1949.

Generators made at Liverpool. By whom made Messrs. Campbell & Isherwood. Contract No. 140927. When made 1949.

No. of Sets. One. Engine Brake Horse Power 30. M.N. as per Rule 7.5. Total Capacity of Generators 15. Kilowatts.

Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines Heavy Oil - Crossley BN2/10 type. 2 or 4 stroke cycle. 4. Single or double acting Single.

Maximum pressure in cylinders 850 lbs/sq. inch. Diameter of cylinders 5". Length of stroke 6 1/2". No. of cylinders 2. No. of cranks 2.

Mean indicated pressure 121 lbs/sq. inch. Firing order in cylinders. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 12 5/8".

Is there a bearing between each crank No. Moment of inertia of flywheel (16 m² or Kg.-cm.²). Revolutions per minute 1,000.

Flywheel dia. 24". Weight 460 lbs. Means of ignition Compression. Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals as per Rule. As approved. Crank pin dia. 3 1/2" with 2" dia. hole 1/8" offset. Mid. length breadth 4 1/2". Thickness parallel to axis.

Flywheel Shaft, diameter as per Rule. As for Crankshaft. Intermediate Shafts, diameter as per Rule. General armature, moment of inertia (16 m² or Kg.-cm.²).

Are means provided to prevent racing of the engine when declutched Yes. Means of lubrication Forced. Kind of damper if fitted None fitted.

Are the cylinders fitted with safety valves No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes.

Cooling Water Pumps, No. One plunger type 600 galls/hr. at 1000 R.P.M. driven off engine. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size. One 7/8" dia. x 1 1/2" stroke, driven off engine.

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. State No. of Report or Certificate.

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. Total cubic capacity. Internal diameter. thickness.

Seamless, lap welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure by Rules.

ELECTRIC GENERATORS:—Type Enclosed ventilated - Drip-proof.

Pressure of supply 220 volts. Full Load Current 68. 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. and do the results comply with the requirements.

If the generators are 100 kw. or over have they been built and tested under survey Tested under survey - Certificate attached to Rpt. No. 13839.

Details of driven machinery other than generator "Hamworthy" Circ. Water Pump No. 80974 & Two Stage Air Compressor No. 78039 driven through clutch.

PLANS.—Are approved plans forwarded herewith for Shafting 21st June, 1948. Receivers. Separate Tanks.

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

SPARE GEAR

The foregoing is a correct description,

CROSSLEY BROTHERS LIMITED,

Manufacturer.

Dates of Survey while building { During progress of work in shops - -) 1949. May 6, 12, 27. September 2, 4.
{ During erection on board vessel - -)
Total No. of visits

Dates of Examination of principal parts—Cylinders 25.5.49. Covers 12.5.49/27.5.49 Pistons 2.9.49. Piston rods

Connecting rods 6.5.49. Crank and Flywheel shafts 18.5.48. Intermediate shafts

Crank shaft { Material .40 Carbon Steel Forging. Tensile strength 44.8 Tons per sq. inch.
Elongation 27% - 2". Identification Marks LLOYD'S NO. 3336 P.W.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case. No. If so, state name of vessel

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This engine has been constructed under special survey in accordance with the Rules and approved plan.

The materials and workmanship are good.

This marine auxiliary set has been examined under working conditions on the test bed, the engine, direct coupled to its electric generator, for 3 hours at full load followed by 1 hour at 10% overload and the circulating water pump and air compressor subsequently, with satisfactory results.

The set has been forwarded to Lowestoft for installation in the vessel.

Forging Report No. F.5780 and Certificate C.8066 attached herewith.

The amount of Fee ... £ 4 : 0 : 0 { When applied for 29.9.1949 (R.M.)
Travelling Expenses (if any) £ - : 10 : 0. { When received 19

Committee's Minute

Assigned In uniki see J.E. Rpt

FRI 2 DEC 1949

Surveyor to Lloyd's Register of Shipping



Lloyd's Register Foundation