

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 11291

22 DEC 1942

9 AUG 1943

Date of writing Report 23-11 1942 When handed in at Local Office 10 Port of Manchester

No. in Survey held at Manchester Date, First Survey 20-10-42 Last Survey 17-11 1942
Reg. Book. Number of Visits 3

on the Twinn Triple Quadruple Screw vessel EMPIRE RANCHER Tons { Gross _____ Net _____

Built at _____ By whom built John Harker Yard No. 127 When built _____

Owners _____ Port belonging to _____

Oil Engines made at Manchester By whom made Crossley Bros ENGINE Contract No. 131929 When made 42

Generators made at _____ By whom made _____ Contract No. _____ When made _____

No. of Sets One Engine Brake Horse Power 10 Nom. Horse Power as per Rule 7.8 Total Capacity of Generators _____ Kilowatts.

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

Maximum pressure in cylinders 900 lb/sq in Diameter of cylinders 4" Length of stroke 4 1/2" No. of cylinders One No. of cranks One

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 3 3/4" Is there a bearing between each crank _____

Revolutions per minute 1500 Flywheel dia. 19 Weight 178 lb Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 3 1/2" Crank pin dia. 2 3/8" Crank Webs as per Rule 4 1/2" Mid. length breadth 4 1/2" Thickness parallel to axis as fitted 3 1/2" Mid. length thickness 1 3/8" Thickness around eyehole Solid

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners _____

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced

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

Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____

Lubricating Oil Pumps, No. and size One 3/16 dia x 1/2 Stroke at 750 Revs per min.

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 _____

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

If alternating current system, state the periodicity _____ Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on and off _____

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

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

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 _____

PLANS. Are approved plans forwarded herewith for Shafting Approved 8-8-42 Receivers _____ Separate Tanks _____

SPARE GEAR As per Rule Requirements.

The foregoing is a correct description,

CROSSLEY BROTHERS LIMITED,

Manufacturer.



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004387-004393-0020

Dates of Survey while building { During progress of work in shops - - 20-10-42, 21-10-42, 17-11-42.
 { During erection on board vessel - - -
 Total No. of visits 3.

Dates of Examination of principal parts—Cylinders 20-10-42 Covers 21-10-42 Pistons 21-10-42 Piston rods ✓

Connecting rods 21-10-42 Crank and Flywheel shafts 20-10-42 Intermediate shafts ✓

Crank and Flywheel shafts, Material O.H. Ingot Steel Identification Marks LLOYDS N° M96 EG 20-10-42.

Intermediate shafts, Material ✓ Identification Marks ✓

Identification marks on Air Receivers ✓

Is this machinery duplicate of a previous case Yes 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, of listed materials, and in accordance with the Secretary's letters, approved plans and Rule Requirements.

The materials and workmanship are of good quality, and the engine when tested in the shop under full load conditions, showed satisfactory results.

In my opinion this engine is suitable to be placed on board a vessel, classed with this Society, for the purpose intended.

The above Engine installed on board Empire Rancher at Knottingley and Coole under Special Survey to drive Dynamo as arranged by makers. WSS

The amount of Fee ... £ 2 : 2 :
 Travelling Expenses (if any) £ : 5 :
 When applied for, 21-12-1942
 When received, 19

E. Grieve pp. H. Newton
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 17 AUG 1943

Assigned sec minute on H. H. R. R. R.



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