

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 11295

22 DEC 1942 9 AUG 1943

Received at London Office

Date of writing Report 23-11-1942 When handed in at Local Office 19 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 4

on the Single Twin Triple Quadruple Screw vessel "EMPIRE RANCHER" Tons 147
Gross _____
Net _____

Built at _____ By whom built John Harber Yard No. 146 When built _____

Owners _____ Port belonging to _____

Oil Engines made at Manchester By whom made Crossley Bros. ENGINE Contract No. 131931 When made 1942

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

No. of Sets One Engine Brake Horse Power 8 Nom. Horse Power as per Rule 2.3 Total Capacity of Generators 4.5 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 lbs/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 1250 Flywheel dia. 19" Weight 178 lbs Means of ignition Compression Kind of fuel used Heavy oil

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

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

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 9/16" dia x 1/2" Stroke at 625 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 all terminals accessible, clearly marked, and furnished with sockets ✓

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 ✓
(If not, state date of approval)

SPARE GEAR As per Rule Requirements ✓

The foregoing is a correct description.
CROSSLEY BROTHERS LIMITED,
August Manufacturer.



004387-004393-0018

Dates of Survey while building: 20-10-42; 21-10-42, 11-11-42, 17-11-42
 Total No. of visits: 4

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 M96. E.G. 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 tested 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.

[This machine installed on board EMPIRE RANCHER at Knottingly & Gode under Special Survey to drive the windlass W.S.S. 443]

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

E. Greaves pp S. Newton
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 17 AUG 1943

Assigned *see minute on Sub J.E.R. pt.*



1m.5.37.—Transfer. (The Surveyors are requested not to write on or below the space for Committee Minute.)