

Compressor - Centrifugal Pump.

# REPORT ON OIL ENGINE ~~ELECTRIC GENERATOR~~ SETS.

No. 11292  
- 9 AUG 1942

Received at London Office 22 DEC 1942

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

Port of Manchester

No. in Survey held at Manchester.

Date, First Survey 20<sup>th</sup> October 1942 Last Survey 17<sup>th</sup> Nov 1942

Reg. Book. Single on the Twin Triple Quadruple

Screw vessel "EMPIRE RANCHER"

Number of Visits 4.

Tons { Gross Net

Built at By whom built John Harker Yard No. 147 When built

Owners Port belonging to

Oil Engines made at Reddish Manchester By whom made Crossley Bros Contract No. 131927 When made 1942.

Generators made at By whom made Contract No. When made

No. of Sets One Engine Brake Horse Power Six Nom. Horse Power as per Rule 1.7 Total Capacity of Generators Kilowatts.

IL 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/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 1000 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 as fitted 3 1/4" Crank pin dia. 2 3/8" with 1 3/16" taper Crank Webs Mid. length breadth 4 1/2" Mid. length thickness 1 3/8" Thickness parallel to axis shank 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 13.5 gals per hour.

Air Compressors, No. One No. of stages two Diameters 3 1/4" + 1 1/8" Stroke 3 1/4" Driven by clutch

Scavenging Air Pumps, No. Diameter Stroke Driven by

IR 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 as per rule when full 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

LA.N.S. Are approved plans forwarded herewith for Shafting Approved 8-8-42 Receivers Separate Tanks

SHAFTING GEAR As per Rule Requirements

The foregoing is a correct description. CROSSLEY BROTHERS LIMITED,

J. K. Harker

Manufacturer.



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Dates of Survey while building: During progress of work in shops - - - 20<sup>th</sup> October 1942; 21<sup>st</sup> October 1942, 4<sup>th</sup> November 1942, 17<sup>th</sup> November 1942.  
 During erection on board vessel - - -  
 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 21/10/42  
 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 No 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.

Im. 4.39.—Transfer. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

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

E. Spricer pp. H. Martin  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 17 AUG 1943

Assigned sec minute on Sub L to Rpb



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