

Compressor - Centrifugal Pump.
REPORT ON OIL ENGINE ~~ELECTRIC GENERATOR~~ SETS.

No. 11292
 9 AUG 1942

Date of writing Report **23-11-42** When handed in at Local Office **1942** Port of **Manchester**
 No. in Survey held at **Manchester** Date, First Survey **20th October 1942** Last Survey **17th Nov 1942**
 Reg. Book. Number of Visits **4**

on the ^{Single} ~~Twain~~ ^{Triple} ~~Quadruple~~ Screw vessel **"EMPIRE RANCHER"** 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**
 ENGINE N^o

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/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 **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** Crank pin dia. **2 3/8" with 1 1/2" hole** Mid. length breadth **4 1/2"** Thickness parallel to axis
 as fitted **3 1/4"** Crank Webs Mid. length thickness **1 9/8"** Thickness around eye hole **Solid**

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 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

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

SHAFT GEAR As per Rule Requirements

The foregoing is a correct description.

CROSSLEY BROTHERS LIMITED,

J. K. 1942

Manufacturer.



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Lloyd's Register Foundation

004387-004393-0019

Dates of Survey while building
During progress of work in shops - -
During erection on board vessel - - -
Total No. of visits

20th October 1942 ; 21st October 1942 , 4th November 1942. 17th November 1942.

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.....

Committee's Minute TUES. 17 AUG 1943

Assigned sec minute on Sub L to Rpb

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