

This has fitted instead of ER valves Dynamic No 146  
BHP 3 at 1250 RPM

ANCHOR WINDLASS

REPORT ON OIL ENGINE ~~ELECTRIC GENERATOR SETS~~

No. 11294

Date of writing Report 23-11-1942 When handed in at Local Office 19 Port of Manchester Received at London Office 22 DEC 1942 - 5 MAY 1943

Survey held at Manchester Date, First Survey 20-10-42 Last Survey 17-11-1942 Number of Visits 4

on the Single Screw vessel (MOTOR COLLIER) "EMPIRE REAPER" Tons Gross Net

built at Knottstingley By whom built John Barker Yard No. 146 When built 1943

owners Ministry of War Transport Port belonging to

Oil Engines made at Manchester By whom made Crossley Bros ENGINE Contract No. 131928 When made 1942

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 2.8 Total Capacity of Generators Kilowatts.

TYPE OF 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" as fitted 3 1/2" Crank pin dia. 2 3/8" Crank Webs Mid. length breadth 1 1/2" Mid. length thickness 1 3/8" Thickness parallel to axis 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 9/16" 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 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

SHAFTING GEAR As per Rule Requirements

The foregoing is a correct description,  
CROSSLEY BROTHERS LIMITED,  
Manchester

Manufacturer.



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Foundation

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28/11/42

Dates of Survey while building  
 During progress of work in shops - - } 20-10-42, 21-10-42, 4-11-42, 17-11-42,  
 During erection on board vessel - - - }  
 Total No. of visits 4.

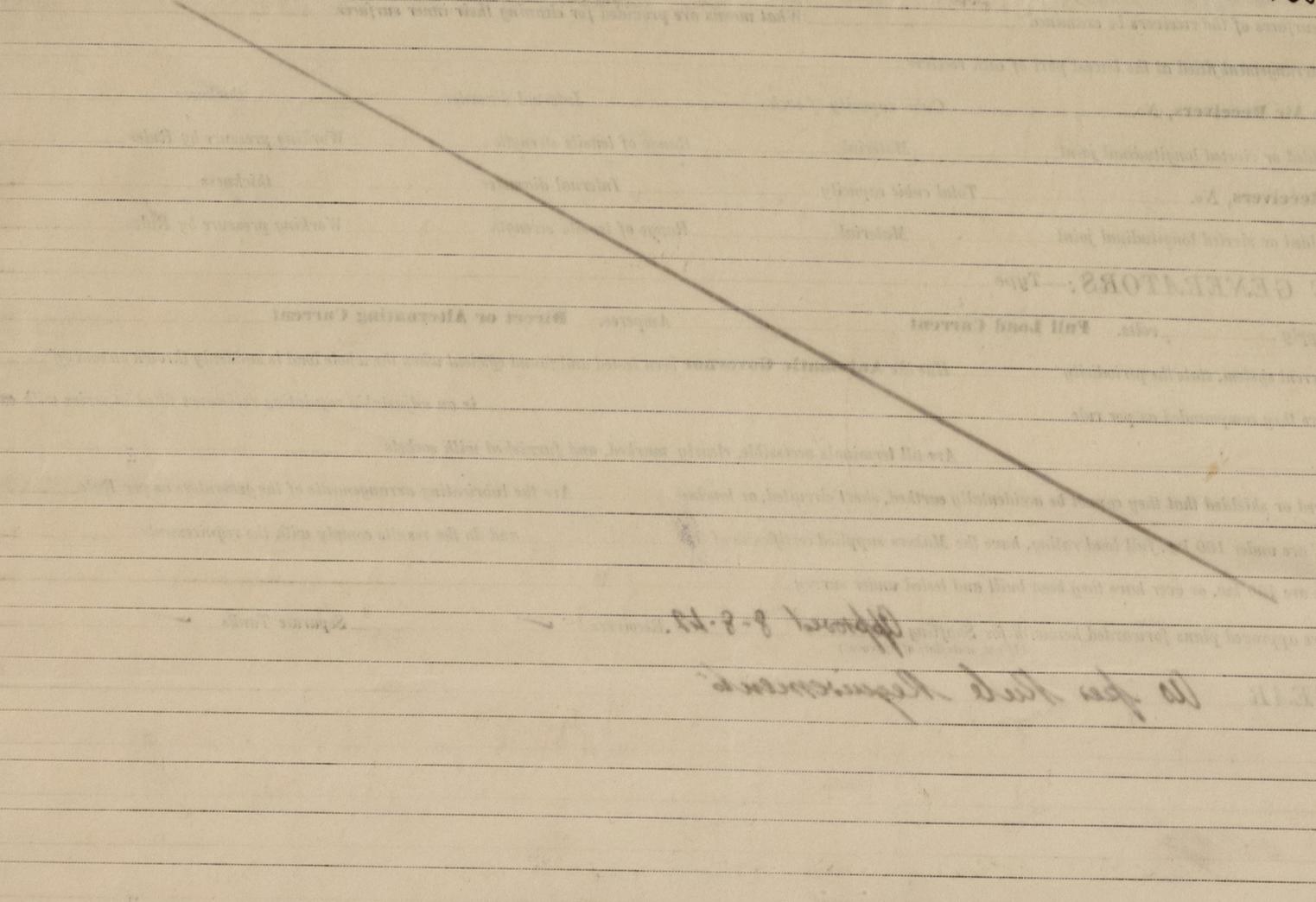
Dates of Examination of principal parts—Cylinders 20-10-42 Covers 21-10-42 Pistons 21-10-42 Piston rods ✓  
 Connecting rods 21-10-42 Crank and Flywheel shafts 20-10-42 Intermediate shafts ✓  
 Crank and Flywheel shafts, Material O. H. Ingot Steel Identification Marks Lloyds No M96 EG. 20-10-42  
 Intermediate 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 tested materials and in accordance with the Secretary's letter, approval 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 REAPER" at Knottingly and Hull; tried under working conditions found satisfactory* *W.S.S.*



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

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

Committee's Minute  
 Assigned *See fe machy rpt*  
 FRI. 21 MAY 1943

