

COMPRESSOR REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 20810

DEC 29 1938

Date of writing Report 21st December 1938 When handed in at Local Office 21st December 1938 Port of Grimsby
 No. in Survey held at Lincoln Date, First Survey 19. 7. 1938 Last Survey 14. 12. 1938
 Reg. Book. 87781 on the Single Twin Triple Quadruple Screw vessel "DARONIA"
 Number of Visits 15

built at Two-on-Two (Newburn) By whom built R & W Hawthorn Leslie & Co Ltd Yard No. 617 When built 1939
 Tons { Gross _____ Net _____

Port belonging to _____
 Engines made at Lincoln By whom made Ruston & Hornsby, Ltd ENGINE Contract No. 190239 When made 1938
 COMPRESSOR generators made at Schiedam By whom made W. A. Hoeks Machine- en Juutstoffabriek Contract No. 724 When made 1938
 No. of Sets One Engine Brake Horse Power 60 Nom. Horse Power as per Rule 18.6 Total Capacity of Generators _____ Kilowatts.

L ENGINES, &c.—Type of Engines 3 VCRZ. Vertical Solid Injection 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 400 lbs. Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 3 No. of cranks 3
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8" Is there a bearing between each crank Yes
 Revolutions per minute 450 Flywheel dia. 3'-4" Weight 19 cwt. Means of ignition Compression Kind of fuel used Heavy oil.
 Crank Shaft, dia. of journals as per Rule. Approved 6" Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis shrunk
 as fitted 6" Mid. length thickness 2 1/2" Thickness around eyehole 3/4"
 Flywheel Shaft, diameter as per Rule. Approved 6" Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 3/4"
 as fitted 6" 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 Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Water cooled.
 Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Lubricating Oil Pumps, No. and size One, geared.
 Air Compressors, No. One No. of stages Two Diameters 18 1/2" & 20 1/2" Stroke 160" Driven by Engine
 Sucking 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 ✓
 Are 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 ✓
 Is 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 ✓
 Are generators, are they compounded as per rule ✓ is an adjustable regulating resistance fitted in series with each unit 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 ✓
 Do the generators are under 100 kw. full load rating, have the Makers supplied certificates of test ✓ and do the results comply with the requirements ✓
 Do the generators are 100 kw. or over have they been built and tested under survey ✓

ANS. Are approved plans forwarded herewith for Shafting 11-11-32 Receivers ✓ Separate Tanks ✓
 (If not, state date of approval)

ARE GEAR

As per Rule requirements. ✓

Ruston & Hornsby Limited,
 The foregoing is a correct description,

Oil & Gas Engine Dept.

Manufacturer.



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Foundation

002620-002630-0011

102235910
Dates of Survey { During progress of work in shops - - } 1937 Jul 19. 22. Aug 9. 12. 19 Sep 20. 23. 30 Oct 28 1938 Jun 2 Jul 21 Nov 13. 14 Dec 1. 14
while building { During erection on board vessel - - - }
Total No. of visits 18

Dates of Examination of principal parts—Cylinders 1-12-38 Covers 1-12-38 Pistons 1-12-38 Piston rods ✓

Connecting rods 2-6-38 Crank and Flywheel shafts 14-11-38 Intermediate shafts ✓

Crank and Flywheel shafts, Material Steel Identification Marks LLOYD'S 3424-14-11-38 AS.

Intermediate shafts, Material Housing Identification Marks LLOYD'S 3343-14-11-38 AS.

Identification marks on Air Receivers ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel Lms. Rpt. No. 20465.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This engine and compressor have been built under special survey in accordance with the Rules and approved plans.

The workmanship and materials are good.

Running tests have been carried out at the Mahari Works with satisfactory results.

The set has been despatched to Newcastle-on-Tyne to the order of Messrs R. W. Hawthorn Leslie & Co. Ltd. for fitting on board the vessel.

This engine has been efficiently installed on board MV "DARONIA" examined under working conditions and found satisfactory.

L. Despatch.

1m. 237. - Transfer.
(The Surveyors are requested not to write on or below the space for Committee Minute.)

74203/P/V. 8964 - 27/12/3650
Request form attached to Lms Rps 20376.

The amount of Fee ... £ 5 : :
Travelling Expenses (if any) £ : :
When applied for, 28/12/38
When received, 19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned



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ENCLOSURE
5 Test Certificate