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20 MAR 1950

Rpt. 4c
IN D.O.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 777

Received at London Office. 18 MAR 1950
NOTTINGHAM.

Date of writing Report 19 When handed in at Local Office 19 Port of

No. in Survey held at Lincoln Date, First Survey Last Survey 19
Reg. Book. Number of Visits

on the Twin Triple Quadruple Screw vessel MILFORD KNIGHT Tons Gross Net
Built at Selby By whom built Cochrane & Sons Ltd., Yard No. 1357 When built

Owners Port belonging to
Oil Engines made at Lincoln By whom made Ruston & Hornsby Ltd., Contract No. 11/481110 When made

Generators made at Norwich By whom made Laurence Scott & Electromotors Contract No. When made

No. of Sets 1 Engine Brake Horse Power 15 M.N. as per Rule 3.75 Ltd., Total Capacity of Generators 9 Kilowatts.

Is Set intended for essential services

OIL ENGINES, &c.—Type of Engines 2VSHZ. Eng. No. 288127 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinders 850 lbs Diameter of cylinders 4 1/2" Length of stroke 4 1/2" No. of cylinders 2 No. of cranks 2

Mean indicated pressure 104 Firing order in cylinders 1 - 2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.7/16"

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 980 lb.ft.² Revolutions per minute 1000

Flywheel dia 2 x 19 5/8" Weight 572 lbs. (2 wheels) Means of ignition Compression Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals as per Rule 2.3/8" as fitted Crank pin dia. 2.3/4" Crank Webs Mid. length breadth 3.3/4" Thickness parallel to axis
Mid. length thickness 1.3/8" shrunk Thickness round eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule General armature, moment of inertia (16 m² or Kg.-cm.²)

Are means provided to prevent racing of the engine when declutched Yes Means of lubrication Forced Kind of damper if fitted

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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size one 165 gals. per hour. Engine driven.

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 D.P. CW. CR. No. 157184. Pressure of supply 110 volts Full Load Current 81.6 Amperes Direct or Alternating Current D.C.

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 Yes Generators, are they compounded as per Rule Yes is an adjustable regulating resistance fitted in series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

If the generators are under 100 kw. full load rating, have the makers supplied certificates of test Applied for and do the results comply with the requirements Yes

If the generators are 100 kw. or over have they been built and tested under survey Through Clutch

Details of driven machinery other than generator Air Compressor. Hamworthy No. 80805. Pump. Hamworthy No. 80957.

PLANS.—Are approved plans forwarded herewith for Shafting 13.4.43. Receivers Separate Tanks (If not, state date of approval)

Have Torsional Vibration characteristics if applicable been approved Armature shaft Drawing No. (state date of approval)

SPARE GEAR Rule Requirements.

The foregoing is a correct description,

Ruston & Hornsby Limited. Manufacturer.

Meeves Engineering Divn.



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Dates of Survey while building { During progress of work in shops - - } 31.10.49. 3.2.50.
 { During erection on board vessel - - }
 Total No. of visits 2

Dates of Examination of principal parts—Cylinders 31.10.49. Covers as cyls. Pistons as cyls. Piston rods -

Connecting rods as cyls. Crank and Flywheel shafts Intermediate shafts

Crank shaft { Material S.M.O.H. steel. Tensile strength 40/45 Tons/sq.inch.
 { Elongation Identification Marks LL.3774. BWB.3067. TDS.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case If so, state name of vessel Standard.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under Special Survey in accordance with the approved plans and rules of the Society, the materials and workmanship being good.

On completion, the set was tried in the shops under working conditions and found satisfactory and governor tested.

The set has been forwarded to Selby for installation on board the vessel.

The amount of Fee ... £ 4 : 0 : 0 { When applied for 14/5/ 1950
 Travelling Expenses (if any) £ : : { When received 19

Committee's Minute TUES. 9 JAN 1951

Assigned See F.E. Selby opt



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