

RECEIVED

4c.

23 SEP 1949

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 74536

27 SEP 1949

Received at London Office

IN DO 16.9.49 19 When handed in at Local Office 14.9.49 19 Port of Glasgow

Survey held at Glasgow Date, First Survey 4/4/49 Last Survey 5.8.49 19

Screw vessel. "NORDBO" OIL TANKER Number of Visits 4

Tons Gross Net

at Fort Glasgow By whom built Wm. Hamilton & Co. Ltd. Yard No. 480 When built

Port belonging to

Engines made at Glasgow By whom made Ganniff Engines Ltd. Contract No. 11635 When made 1949

Generators made at Sunderland By whom made Sunderland Forge & Eng. Co. Ltd. Contract No. 480 When made 1949

of Sets 1 Engine Brake Horse Power 80 M.N. as per Rule 20 Total Capacity of Generators Kilowatts.

Intended for essential services.

ENGINES, &c.—Type of Engines Revers. Injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 650 x 24 1/2 Diameter of cylinders 6" Length of stroke 4" No. of cylinders 4 No. of cranks 4

Indicated pressure 120 x 15 1/2 Firing order in cylinders 1.2.4.3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 1/2"

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 800

Flywheel dia. 24" Weight 364 lbs Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals 3 1/2" Crank pin dia. 3 1/2" Crank Webs Mid. length breadth 4 1/2" Thickness parallel to axis 50 x 12 Forged

Intermediate Shafts, diameter 3 1/2" General armature, moment of inertia (16 m² or Kg.-cm.²)

Means provided to prevent racing of the engine when decoupled Yes Means of lubrication Forced Kind of damper if fitted NONE

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Driving Water Pumps, No. 1 @ 4.5 gals/min Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size 2 @ 1 3/4 gals/min

Compressors, No. No. of stages Diameters Stroke Driven by

Sucking Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate No. 3595

Each receiver, which can be isolated, fitted with a safety valve as per Rule No

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Through Screwed plug

Is there a drain arrangement fitted at the lowest part of each receiver Yes

Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Unless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Sucking Air Receivers, No. Total cubic capacity 1 cu ft Internal diameter 4 9/16" thickness 1/32"

Unless, lap welded or riveted longitudinal joint Seamless Material S20C2 Range of tensile strength 28/32 Working pressure by Rules 6.38/47

ELECTRIC GENERATORS:—Type

Voltage of supply volts. Full Load Current Amperes. Direct or Alternating Current

Alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

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

Are the generators shielded that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule

Are the generators under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

Are the generators 100 kw. or over have they been built and tested under survey

Are there any other driven machinery other than generator NONE

PLANS.—Are approved plans forwarded herewith for Shafting 14.3.49 Receivers 15.9.49 Separate Tanks

Are the Torsional Vibration characteristics if applicable been approved Not applicable Armature shaft Drawing No.

SHAFTING GEAR As per Rules & attached List

The foregoing is a correct description,
GLENIFFER ENGINES LTD.

Manufacturer.

Works Manager



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Foundation

005089-005097-0047

During progress of work in shops - - - 1949. Apr. 4th May 12th 18th Aug 5th
Dates of Survey while building
During erection on board vessel - - -
Total No. of visits 4
Dates of Examination of principal parts—Cylinders 12.5.49 Covers 12.5.49 Pistons 18.5.49 Piston rods ✓
Connecting rods 18.5.49 Combined Crank and Flywheel shafts 18.5.49 Intermediate shafts ✓
Crank shaft Material S.M.S Tensile strength 44.6 Tons/Lt.
Elongation 28% Identification Marks 6164/5 4002/4004: 18.5.49: N.E.
Flywheel shaft, Material Identification Marks
Identification marks on Air Receivers C.T.C. No 9/3149; 1164/5 T.P. 1100/185/0 W.P. 553/185/0 P.R. 21.4.49 ✓

Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel Lithgow's Yard No 1019/1026 ✓

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

This auxiliary engine has been constructed under Special Survey in accordance with the Rules, Approved Plans & Secretary's orders.

The materials and workmanship are good.

On completion the engine has been subjected to full load trials on shop hot bed at 800 R.P.M. coupled to a 40 K.W. 110 Volt electric generator No 41389, manufactured by Sunderland Forge & Eng Co Ltd.

This unit has now been dispatched to Messrs Wm. Hamilton & Co. Ltd. for installation in Yard No 480, where it will be further examined under working conditions.

This engine has been efficiently installed in the vessel & tested on full load with satisfactory results

Charles J. Hunter
Greenock
21/9/49

The amount of Fee £ 4 : - : - When applied for 21 SEP 1949 19
Travelling Expenses (if any) £ : : When received 19

Committee's Minute GLASGOW 21 SEP 1949 JHC

Assigned deferred

A. C. Cairns, Juniper & Howison.
Surveyors to Lloyd's Register of Shipping.



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