Newcastle-on-Tyne 97701

pt. 4c.

REPORT ON OIL ENGINE ~~ELECTRIC GENERATOR~~ COMPRESSOR SETS. No. 20948

Received at London Office MAY 15 1939

Date of writing Report 13.5.1939 When handed in at Local Office 13-5-1939 Port of Grimsby

No. in Reg. Book. Survey held at Lincoln Date, First Survey 19-7-1939 Last Survey 8th May 1939 Number of Visits 14

on the Single / ~~Twin~~ / ~~Triple~~ / ~~Quadruple~~ Screw vessel TORINIA Tons Gross 10364 Net 6178

Built at Newcastle on Tyne By whom built Swan Hunter & Wigham Richdsn Ltd Yard No. 1561 When built 1939-7.

Owners Anglo-Saxon Petroleum Co Ltd Port belonging to London

Oil Engines made at Lincoln By whom made Ruston & Hornsby, Ltd Engine ~~Contract~~ No. 190240 When made 1939.

~~Compressor~~ / ~~Generators~~ made at Schiedam By whom made W.A. Hoeks Machine-en Ijzerstoffabriek ~~Contract~~ No. 744 When made 1939

No. of Sets One Engine Brake Horse Power 60 Nom. Horse Power as per Rule 17 Total Capacity of Generators - Kilowatts.

OIL ENGINES, &c.—Type of Engines 3VCRZ - Vertical Solid Injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 700 lbs. Diameter of cylinders 8" Length of stroke 10¾" No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 9⅛" Is there a bearing between each crank Yes

Revolutions per minute 450 Flywheel dia. 3'-4" Weight 19 Cwts. Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule Approved as fitted 6" Crank pin dia. 4¾" Crank Webs Mid. length breadth 8" Thickness parallel to axis ✓ shrunk Mid. length thickness 2½" Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule Approved as fitted 6" **Intermediate Shafts**, diameter as per Rule ✓ as fitted ✓ Thickness of cylinder liners ¾"

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 ✓

Lubricating Oil Pumps, No. and size One, geared.

Air Compressors, No. One No. of stages Two Diameters 184 m/m & 206 m/m Stroke 160 m/m Driven by Engine

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 11-11-32 (If not, state date of approval) Receivers ✓ Separate Tanks 25-2-38.

SPARE GEAR

As per Rule requirements ✓

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

R. Coyle Manufacturer.

Oil & Gas Engine Dept.

W1150 - 0146

Dates of Survey while building — During progress of work in shops: 1939 July 19.22. Aug 9.13.19. Sep 2.20 1939 Jan 2.5. Feb 2.9. May 1.4.8.
During erection on board vessel:
Total No. of visits 14.

Dates of Examination of principal parts—Cylinders 2.2.39 Covers 2.2.39 Pistons 2.2.39 Piston rods ✓

Connecting rods 16.6.38 - 2.2.39 Crank and Flywheel shafts 2.1.39 Intermediate shafts ✓

Crank and Flywheel shafts, Material Steel Identification Marks LLOYDS 3421 - 2.1.39 AS

Intermediate shafts, Material ✓ Housing Identification Marks LLOYDS 3344 - 5.1.39 AS.

Identification marks on Air Receivers ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel Gen Rpt No 20376.

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 Makers works with satisfactory results.

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

This Oil Engine / Compressor Set has been satisfactorily installed on board the TORINIA. SHIPR's Yard No 1561.

A Watt
Newcastle on Tyne
July 1939.

Request form attached Gen Rpt 20376.
9/4203/P/IV.8965 - 37/13-2651.

The amount of Fee ... ... £ 5 : - - When applied for, 13/8/39

Travelling Expenses (if any) £ : When received. 15 Aug 1939

Committee's Minute TUE 15 AUG 1939

Assigned Lee F.E. machy r/l.

A Watt
Surveyor to Lloyd's Register of Shipping.

1m,11,37.—Transfer. (MADE IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee Minute.)