

Rpt. 4c

Date of writing report 15.4.57. Received London 29 APR 1957 Port NOTTINGHAM. No. FE. 1346. Survey held at Lincoln. No. of visits 2. First date 28.3.56. Last date 20.4.56.

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship (Or Contract No. if name unknown) Owners (Or Consignees)

Ship Built to the order of: - M/S. J.G. Kincaid & Co. Ltd., when Yard No. Auxiliary Engines or Gas Turbines made at Lincoln by M/S. Ruston & Hornsby Ltd. when Eng. Nos 404645. Total No. of sets and description (including type name) One - 8VEBZ - Auxiliary.

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 8. Dia. of cylinders 10 1/2". Stroke 14 1/2". 2 or 4 stroke cycle 4. Maximum approved BHP 480 at 500 RPM. Corresponding MIP 99.5. Maximum pressure 7.15. Fuel Diesel Oil. Are cylinders arranged in Vee or other special formation? No. If so, No. of crankshafts per engine None. Is engine of opposed piston type? No. No. and type of mechanically driven scavenge pumps or blowers per engine. No. of exhaust gas driven blowers or superchargers per engine. Is welded construction used for: Bedplate? No. Entablature? No. Total internal volume of crankcase (if 20 cu. ft. or over) 148.2 cu. ft. No. and total area of crankcase explosion relief devices 16 - 380 sq. ins. Are flame guards or traps fitted? Cooling medium for: Cylinders. Pistons. No. of attached pumps: F.W. cooling One. S.W. cooling. Lubricating oil One. How is engine started?

SHAFTING. Is a damper or detuner fitted? No. No. of main bearings 10. Are bearings of ball or roller type? No. Distance between inner edges of bearings in way of cranks 12.5/16". Crankshaft: Built, semi-built, solid. Material of crankshaft Steel. Approved minimum tensile strength. Dia. of pins 6 1/2". Journals 8". Breadth of webs at mid throw 1.1". Axial thickness 3.7/16". If shrunk, radial thickness around eyeholes. Dia. of flywheel 1.6". Weight 24.5 c.wts. Are balance weights fitted? No. Total weight. Rad. of gyration. Dia. of flywheel shaft 8". Has each engine been tested in shop? Yes. How long at full power? Was it tested with driven machinery attached? Yes. Was the governing tested and found satisfactory? Yes. Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 24.11.54. Date of approval of shafting 6.7.39. Identification marks on shafting LL.R. 1260 SHE. ESC. 803A. Particulars of driven machinery 300 kW. DC. W.H. Allen Generator No. E3/48727/2.

AUXILIARY GAS TURBINES. BHP per set. At. RPM of output shaft. Open or closed cycle? Arrangement of turbines. HP drives at RPM HP gas inlet temp. pressure. (A small diagram should be attached showing gas cycle) IP " " " " LP " " " " " No. of air compressors per set. Centrifugal or axial flow type? Material of turbine blades. Material of compressor blades. No. of air coolers per set. No. of heat exchangers per set. How are turbines started? Are the turbines operated in conjunction with free piston gas generators? Total No. of free piston gas generators. Dia. of working pistons. Dia. of compressor pistons. No. of double strokes per minute at full power. Gas delivery pressure. Gas delivery temperature. Have the turbines and attached equipment been tested in shop? How long at full power? Were they tested with driven machinery attached? Particulars of gearing. Date of approval of plans. Identification marks. Particulars of driven machinery.

ELECTRIC GENERATORS. Port and No. of Certificate for generators of 100 Kw. and over. For generators under 100 Kw., has Makers' Certificate been obtained? Are Certificates attached? Yes.

The foregoing description is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable) Ruston & Hornsby, Limited Manufacturer. Is this machinery duplicate of a previous case? No. If so, which?

GENERAL REMARKS. State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible. This Engine has been constructed under Special Survey in accordance with the Approved Plans and Rules of the Society, materials and workmanship being good. The Generating Set has been tested in the Shops under working conditions and the Governors tested with satisfactory results. The Set has been forwarded for installation in the vessel. Explosion relief device fitted on each crankcase door.

Survey Fee £34. Expenses Nil. Date when a/c rendered. Engineer Surveyor to Lloyd's Register.

Declaration to be signed by Surveyor at fitting-out Port: - The above described machinery has been fitted on board the in a proper manner and found satisfactory when tested on the (date) under full working conditions.

