

Rpt. 4c

Date of writing report... Received London 23 NOV 1964... Port Copenhagen... No. 21210... Survey held at Holeby... No. of visits 6... First date 12.11.63... Last date 27.1.64

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship m.s. "BIJSK" of Odessa... Owners U.S.S.R. (Or Consignees)... Ship Built at Nakskov by A/S Nakskov Skibsværft when Yard No. 172... Auxiliary Engines ~~Gas Turbines~~ made at Holeby by A/S Burmeister & Wain when 1964 Eng. Nos. 10266... Total No. of sets and description (including type name) One off B&W-DM. 325MTBH-40 Turbocharged, Heavy oil, Trunk piston, solid injection

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 3 Dia. of cylinders 245 mm Stroke 400 mm... 2 or 4 stroke cycle 4 Maximum approved BHP 255 at 500 RPM Corresponding MIP 9.8 kg/cm² Maximum pressure 60 kg/cm²... Fuel Heavy oil Are cylinders arranged in Vee or other special formation? No... Are flame guards or traps fitted? Yes... Cooling medium for: Cylinders Fresh water... Pistons None No. of attached pumps: F.W. cooling None S.W. cooling None Lubricating oil 1 How is engine started? By air

SHAFTING. Is a damper or detuner fitted? No No. of main bearings 4 Are bearings of ball or roller type? No... Distance between inner edges of bearings in way of cranks 315 mm Crankshaft: ~~both~~ semi-built, ~~solid~~ Material of crankshaft SM steel... Approved minimum tensile strength 44 kg/mm² Dia. of pins 170 mm Journals 170 mm Breadth of webs at mid throw 292 mm Axial thickness 90 mm... Rad. of gyration - Dia. of flywheel shaft -... Date of approval of shafting 29.4.63 Identification marks on shafting Lloyd's Cpn No. 1906 KL 11.12.63... Particulars of driven machinery 1 AC generator No. 911836 made by Thomas B. Thrige, Odense 215 KVA 310 amps 400 volts. Generator WD² = 386 kgm²

Port and No. of Certificate for Starting Air Receivers

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 " at " " IP " " " " LP " " " " 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 Odense cert. dated 25/9-63 For generators under 100 Kw., has Makers' Certificate been obtained? Are Certificates attached?

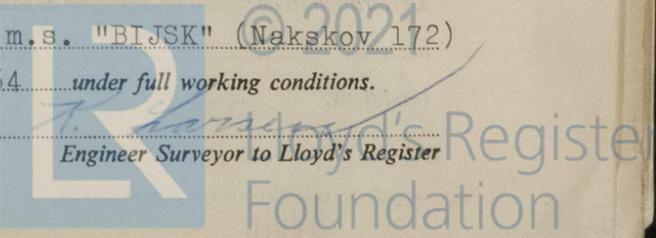
The foregoing description is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable)

Is this machinery duplicate of a previous case? If so, which? AKTIESELSKABET BURMEISTER & WAIN'S MASKIN- OG SKIBSVÆRFT Manufacturer K. Rindholm P.P. Jørgen Hansen

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. The heavy oil engine has been constructed under special survey in accordance with the Rules, approved plans and the Secretary's letters. The material has been tested as required by the Rules and the workmanship is good.

Survey Fee kr. 540,- Expenses kr. 82,- Date when a/c rendered 20/2 1964 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 m.s. "BIJSK" (Nakskov 172) at A/S Nakskov Skibsværft in a proper manner and found satisfactory when tested on the (date) 24.9.64 under full working conditions.



Rpt. 4c

Date of writing report Received London Port No. Survey held at No. of visits First date Last date

FIRST ENTRY REPORT ON AUXILIARY STEAM TURBINE OR STEAM RECIPROCATING ENGINES

Name of Ship (Or Contract No. if name unknown) Owners (Or Consignees) Ship Built at by when Yard No. Auxiliary turbines or engines made at by when Eng. Nos. Total No. of sets and description

STEAM TURBINES. No. of turbines per set BHP per set Steam pressure Steam temperature Type of turbines Particulars of gearing RPM of turbine shaft(s) PCD of pinion(s) PCD of wheel(s) Material of pinion(s) Material of wheel rim(s) Has rotor been dynamically balanced? Diameter of rotor shaft at bearings Does the set include a steam condenser? Is an emergency governor fitted? No. and purpose of attached pumps Has the set been tested in the shop? If so, for how long at full power? Was the governing tested and found satisfactory? Was the set tested with driven machinery attached? Identification marks Particulars of driven machinery

STEAM RECIPROCATING ENGINES. BHP of each at RPM Steam pressure Dia. of cylinders Stroke Dia. of crankshaft journals Pins Material of crankshaft Is crankcase enclosed? If so, is the internal volume 20 cu. ft. or over? No. and total area of crankcase explosion relief devices fitted? Are the bearings forced lubricated? No. and purpose of attached pumps Is a Governor Fitted? 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?

The foregoing description is correct.

Manufacturer

Is this machinery duplicate of a previous case? 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.

Survey Fee Expenses 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 at in a proper manner and found satisfactory when tested on the (date) under full working conditions.

