

Rpt. 4c

Date of writing report 11th Dec. 1959

Received London

Port of Augsburg

No. 1326

Survey held at Munich

No. of visits two

First date 30th Nov.

Last date 9th December 1959

## FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship Brodoimpeks, Beograd  
(Or Contract No. if name unknown)  
Ship Built at Rijeka, Yugoslavia by 3. Maj when 1960 Yard No. 460  
Auxiliary Engines or Gas Turbines made at Munich by Süddeutsche Bremsen A.G. when 1959 Eng. Nos. 96 975  
Total No. of sets and description (including type name) 1 x RHS 518 A

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 8 Dia. of cylinders 140 mm Stroke 180 mm  
2 or 4 stroke cycle 4 Maximum approved PS 196 at 1200 RPM Corresponding MIP 7.72 kg/cm<sup>2</sup> Maximum pressure 60 kg/cm<sup>2</sup>  
Fuel Diesel oil Are cylinders arranged in Vee or other special formation? no If so, No. of  
crankshafts per engine - Is engine of opposed piston type? - 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? - Entablature? - Total internal volume of crankcase (if 20 cu. ft. or over) 310 ltrs. No. and total area of  
crankcase explosion relief devices - Are flame guards or traps fitted? - Cooling medium for: Cylinders water  
Pistons - No. of attached pumps: F.W. cooling 1 S.W. cooling - Lubricating oil 1 How is engine started? by air

SHAFTING. Is a damper or detuner fitted? yes No. of main bearings 9 Are bearings of ball or roller type? no Distance between  
inner edges of bearings in way of cranks 136 mm Crankshaft: Box, semi-hollow, solid Material of crankshaft S.M. Steel, 37Cr4 Approved  
minimum tensile strength 85 kg/mm<sup>2</sup> Dia. of pins 100 mm Journals 115 mm Breadth of webs at mid throw 152 mm Axial  
thickness 32 mm If shrunk, radial thickness around eyeholes - Dia. of flywheel 590 mm Weight 103 kgs. Are balance  
weights fitted? yes Total weight 31.2 kgs. Rad. of gyration 106.5 mm Dia. of flywheel shaft -  
Has each engine been tested in shop? yes How long at full power? 5 hrs. Was it tested with driven machinery attached? no Was the  
governing tested and found satisfactory? yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 29.9.1959  
Date of approval of shafting 8.9.1958 Identification marks on shafting LLOYD'S AUG AG 82 H.K.S. 11.9.59 C27999/928  
Particulars of driven machinery -

Port and No. of Certificate for Starting Air Receivers 2 air receiver, 120 ltrs., No.s. 13800, 13799

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 - at - 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 - Particulars of driven machinery -  
Date of approval of plans - Identification marks -

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 and the particulars are as approved for torsional vibration characteristics (see STANDARD WORDS NOTATION)

SÜDDEUTSCHE BREMSSEN AG, München  
J. V. Böning Manufacturer

Is this machinery duplicate of a previous case? yes If so, which? Yard No. 459

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 heavy oil auxiliary engine has been constructed under special survey in accordance with the require-  
ments of the Rules and otherwise with the approved plans. The material used was tested and the workman-  
ship was found satisfactory. The engine was tested running on makers' test bed under full-, over-, and  
partial loads with satisfactory results. In my opinion the engine can be recommended for the notation  
L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board and tried under  
full working conditions.

nd. frame 40.-  
Survey Fee DM 250.-  
test 100.- 385.-  
Expenses 35.- DM 425.-  
Date when a/c rendered 8.1.1960

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 Rijeka in a proper manner and found satisfactory when tested on the (date) 28/10/60 under full working conditions.

Engineer Surveyor to Lloyd's Register