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Rpt. 4c

Date of writing report 23rd January, 1958 Received London M.A.L.M.Ö Port M.A.L.M.Ö No. 3734
Survey held at M.A.L.M.Ö No. of visits 12 First date 28/3 1957 Last date 14/1 1958.

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship M/T SOUTHERN CLIPPER Owners Rederi AB Clipper
Ship Built at M.A.L.M.Ö by Kockums Mek. Verkstads AB when 1.58 Yard No. 394
Auxiliary Engines 2 Gas Turbines made at Malmö by Kockums Mek. Verkstads AB when 1.58 Eng. Nos. 773/4
Total No. of sets and description (including type name) Two; Heavy Oil, 4 S.C.S.A., Kockum-Man Type G6V 42 A

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 6 Dia. of cylinders 285 mm Stroke 420 mm
2 or 4 stroke cycle 4 Maximum approved BHP 360 at 360 RPM Corresponding MIP 6.87 kg/cm Maximum pressure 50 kg/cm2
Fuel Heavy Oil Are cylinders arranged in Vee or other special formation? No
crankshafts per engine -- Is engine of opposed piston type? No No. and type of mechanically driven scavenge pumps or blowers
per engine None No. of exhaust gas driven blowers or superchargers per engine None Is welded construction
used for: Bedplate? No Entablature? No Total Internal volume of crankcase (if 20 cu. ft. or over) 1.5 m3 No. and total area of
crankcase explosion relief devices 5 a 1.584 dm2 Are flame guards or traps fitted? Yes Cooling medium for: Cylinders Water
Pistons None No. of attached pumps: F.W. cooling None S.W. cooling None Lubricating oil One How is engine started? Compr. Air

SHAFTING. Is a damper or detuner fitted? No No. of main bearings 7 Are bearings of ball or roller type? No Distance between
inner edges of bearings in way of cranks 358 mm Crankshaft Built semi-built solid Material of crankshaft S.M. Steel Approved
minimum tensile strength 44 kg/mm2 Dia. of pins 170 mm Journals 170 mm Breadth of webs at mid throw 280 mm Axial
thickness 99.5 mm If shrunk, radial thickness around eyeholes - Dia. of flywheel 1650 mm Weight 2585 kg Are balance
weights fitted? No Total weight - Rad. of gyration - Dia. of flywheel shaft -
Has each engine been tested in shop? Yes How long at full power? 28 hours 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) 2.4.56.
Date of approval of shafting 24.11.55 Identification marks on shafting Lloyd's No. 822 E.J. 11.10.56; Lloyd's No. 1266 NF 24.11.56.
Particulars of driven machinery Generators.

Port and No. of Certificate for Starting Air Receivers Hbg. No. 1044.
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
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
Date of approval of plans Identification marks Particulars of driven machinery

ELECTRIC GENERATORS. KVA.
Port and No. of Certificate for generators of 100 Kw. and over Stockholm, No. 15252
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)
Signed Kockums Mek. Verkstads AB
G. Kaudern Manufacturer

Is this machinery duplicate of a previous case? Yes If so, which? M/S "NORTHERN CLIPPER" Mmo. F.E. Report No. 3649.

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 above auxiliary oil engines have been constructed under Special Survey in accordance with the Rules, approved
plans and Secretary's letters dated 24.11.55 and 3.4.56.
The material and workmanship are good.

Survey Fee Kr. 1.110:--
Expenses
Date when a/c rendered
Reg

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the M/T "SOUTHERN CLIPPER"
Malmö in a proper manner and found satisfactory when tested on the (date) 17/1 1958 under full working conditions.

Reg