

Rpt. 4c

Date of writing report 26th August, 1960

Received London -

Port of Augsburg

No. 1394

Survey held at Munich

No. of visits two

First date 17th May, 60 Last date 8th June, 1960

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

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

Ship Built at Bremen by A.G. Weser when 1960 Yard No. 1343

Auxiliary Engines or Gas Turbines made at Munich by Süddeutsche Bremsen A.G. when 1960 Eng. Nos. 97277

Total No. of sets and description (including type name) RHS 518 S

INTERNAL COMBUSTION RECIPROCATING ENGINES No. of cylinders per engine 6 Dia. of cylinders 140 mm Stroke 180 mm

2 or 4 stroke cycle 4 Maximum approved BHP 156 at 1300 RPM Corresponding MIP 7.74 kg/cm² Maximum pressure 60 kg/cm²

Fuel Diesel oil Are cylinders arranged in Vee or other special formation? 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) 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 1 Lubricating oil 1 How is engine started? by electric

SHAFTING. Is a damper or detuner fitted? yes No. of main bearings 7 Are bearings of ball or roller type? no

inner edges of bearings in way of cranks 136 mm Crankshaft Built, solid. Material of crankshaft 37Cr4 S.M. Steel Approved

minimum tensile strength 95 kg/mm² 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

governing tested and found satisfactory? yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 28.6.1960

Date of approval of shafting 8.9.58 Identification marks on shafting LLOYD'S AUG AK 47 HKS 29.4.60 136113/552

Particulars of driven machinery

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

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)

SÜDDEUTSCHE BREMSEN AG. 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.

This heavy oil auxiliary engine has been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans.

The material used was tested and the workmanship 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.

Survey Fee DM 40:-

Expenses 100:- DM 395.-

Date when a/c rendered 16.9.60

Declaration to be signed by Surveyor at fitting-out Port: The above described machinery has been fitted on board the AG-Weser, yard No. 1343

at Bremen in a proper manner and found satisfactory when tested on the (date) 28-9-60 under full working conditions.

H. Bumboldt Engineer Surveyor to Lloyd's Register

AG-Weser, yard No. 1343

28-9-60

H. Bumboldt Engineer Surveyor to Lloyd's Register

012868-012874-0089

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..... Owners.....
(Or Contract No. if name unknown) (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.

