

Rpt. 4c

MONDAY 12 MAR 1958

Date of writing report 15th Febr. 1958

Received London

Port of Augsburg

No. 1068

Survey held at Augsburg

No. of visits

19

First date 23rd Sept.

Last date

28th Nov. 1957

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship

(Or Contract No. if name unknown)

Owners

(Or Consignees)

Ship Built at Gävle/Sweden

by A/B Gävle Varv

when 1957/8

Yard No. 99

Auxiliary Engines or Gas Turbines made at Augsburg

by Messrs. M.A.N. AG.

when 1957

Eng. Nos. 400 845,401 175/6

Total No. of sets and description (including type name) 3 x G5V23,5/33

INTERNAL COMBUSTION RECIPROCATING ENGINES.

No. of cylinders per engine 5

Dia. of cylinders 235 mm

Stroke 330 mm

2 or 4 stroke cycle 4

Maximum approved BHP 255

at 600

RPM

Corresponding MIP 6.9 kg/cm²Maximum pressure 50 kg/cm²

Fuel Gas 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

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?

no

Cooling medium for: Cylinders

water

Pistons

No. of attached pumps: F.W. cooling

S.W. cooling

Lubricating oil

1

4,3 m³/h

How is engine started? by air

SHAFTING.

Is a damper or detuner fitted? yes

No. of main bearings 6

Are bearings of ball or roller type?

no

Distance between

inner edges of bearings in way of cranks 284 mm

Crankshaft Built, semi-built, solid

Material of crankshaft SM Steel C40

Approved

minimum tensile strength 55 kg/cm²

Dia. of pins 152 mm

Journals 152 mm

Breadth of webs at mid throw 273 mm

Axial

thickness 73.5 mm

If shrunk, radial thickness around eyeholes

Dia. of flywheel 1200 mm

Weight 1100 kgs.

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? 6 h

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)

23.4.1958

Date of approval of shafting 19.8.55

Identification marks on shafting

LLOYD'S AUG 2996/5843 C

25.10.57

HKS

Particulars of driven machinery

LLOYD'S AUG 2997/2695 B

6.11.57

GH

LLOYD'S AUG 2998/7577 A

6.11.57

GH

Port and No. of Certificate for Starting Air Receivers

1 x 125 ltrs. Cert. No. 8673

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

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

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

Hamburg Nos. 206, 218, 219

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)

Maschinenfabrik Augsburg-Nürnberg A.G.

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. The quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

These heavy oil aux. engines have been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans. The material used in the construction was tested and the workmanship was found satisfactory. The engines were tested running on makers' test bed under full, over, and partial loads with satisfactory results. In my opinion the engines can be recommended for the notation L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board.

Draft 165.-

Key Fee DM 975.-

Frame 120.-

Lenses 50.-

Total DM 1.490.-

When a/c rendered 2.5.1958

Engineer Surveyor to Lloyd's Register

M/S "PAMIR" (YARD NR 99)

Engineer Surveyor to Lloyd's Register

015433-015441-0063