

Rpt. 4c

Date of writing report 21st August, 1957

Received London

4 SEP 1957

Port of Augsburg

No. 977

Survey held at Ulm/Donau

No. of visits one

First date and

Last date 30th July, 1957

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Engines ordered by: Ad.Strüver, Hamburg

Name of Ship
(Or Contract No. if name unknown).Owners Messrs. Malabar Steamship Cy.
(Or Consignees)

Ship Built at Bruges

by Chantiers Navals

when 1957

Yard No. s. C34 + C 35

Auxiliary Engines on Gas Turbines made at Ulm (Donau)

by Messrs. Klöckner-Humboldt-Deutz AG.

when 1957

Eng. Nos. 1946 141-44

1946 145-48 x

Total No. of sets and description (including type name) 2 x A4L 514

INTERNAL COMBUSTION RECIPROCATING ENGINES.

No. of cylinders per engine 4

Dia. of cylinders 110 mm

Stroke 140 mm

2 or 4 stroke cycle 4 Maximum approved BHP 50 at 1500 RPM

Corresponding MIP 7.5 kg/cm²Maximum pressure 70 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 air

Pistons -

No. of attached pumps: F.W. cooling -

S.W. cooling -

Lubricating oil 1

How is engine started? electr.

SHAFTING.

Is a damper or detuner fitted? no

No. of main bearings 5

Are bearings of ball or roller type? no

Distance between

inner edges of bearings in way of cranks 114 mm

Crankshaft: Built, semi-built, solid.

Material of crankshaft SM Steel

Approved

minimum tensile strength 80 kg/mm²

Dia. of pins 75 mm

Journals 75 mm

Breadth of webs at mid throw 116 mm

Axial

thickness 29 mm

If shrunk, radial thickness around eyeholes -

Dia. of flywheel 485 mm

Weight 80 kgs

Are balance

weights fitted? yes

Total weight 57 kgs

Rad. of gyration 64 mm

Dia. of flywheel shaft -

Has each engine been tested in shop? yes

How long at full power? 4 h

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) not applicable.

Date of approval of shafting 13.6.51

Identification marks on shafting

Lloyd's DSF

x Lloyd's DSF

369/7 RFK

369/3 RFK

Particulars of driven machinery

10. 55 HD

10. 55 HD

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

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at

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IP

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LP

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at

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LP

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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 (since no work was applicable)

KLOCKNER-HUMBOLDT-DEUTZ
WERK ULM

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.

These heavy oil auxiliary engines have been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans. The materials used in the construction are good and the workmanship was found to be 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.~~ L.M.C. (with date) when the whole machinery has been satisfactorily fitted on board.

For Mr. Czerny:-

Survey Fee DM 160.-

Expenses 70.-

Total DM 270.-

Date when a/c rendered

23.8.1957

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.

Engineer Surveyor to Lloyd's Register

Lloyd's Register
Foundation

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