

Rpt. 4c

Date of writing report 26th August, 1960

Received London -

Port of Augsburg 1960

No. 1395

Survey held at Munich

No. of visits two

First date 17th May,

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. 97231

Total No. of sets and description (including type name) 1 x BHS 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/cm²Maximum pressure 60 kg/cm²

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) -

No. and total area of

crankcase explosion relief devices -

Are flame guards or traps fitted? -

Cooling medium for: Cylinders fresh water

Pistons -

No. of attached pumps: F.W. cooling 1

S.W. cooling 1

Lubricating oil 1

How is engine started? electr.

SHAFTING.

Is a damper or detuner fitted? yes

No. of main bearings 7

Are bearings of ball or roller type? no

Distance between

inner edges of bearings in way of cranks 136 mm

Crankshaft: Built up, solid

Material of crankshaft S.M. Steel 37Cr4

Approved

minimum tensile strength 85 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 kg

Are balance

weights fitted? yes

Total weight 31.2 kg

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) 28.6.1960

Date of approval of shafting 8.9.58

Identification marks on shafting LLOYD'S AUG AK 52 HKS 29.4.60 137659/578

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

"

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

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 BREMSSEN 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 require-

ments 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.

ame 40.-

Survey Fee DM 225.-

test 100.-

Expenses 30.-

DM 395.-

Date when a/c rendered

9.9.1960

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) 28.8.60 under full working conditions.

G. Brühmann

Engineer Surveyor to Lloyd's Register

Foundation

012868-012874-0088

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

Owners.....
(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.