

Rpt. 4c

Date of writing report 12th Augu st, 1959 Received London Port PARIS No. 14
Survey held at Paris No. of visits 7 First date 27.2.59 Last date 18.7.59

FIRST ENTRY REPORT ON AUXILIARY STEAM TURBINE OR STEAM RECIPROCATING ENGINES

Name of Ship A.C.F. order number 8012 fo. 12A Ateliers et Chantiers de France, Dunkirk
(Or Contract No. if name unknown) (Or Consignees)
Ship Built at Dunkirk by Ateliers et Chantiers de France when 1959 Yard No. 228
Auxiliary turbines or engines made at Paris by Maison Breguet when 1959 Eng. Nos. 2437 & 2438
Total No. of sets and description Two sets of steam turbine auxiliary electrical generating machinery
each driving a 900 KW alternator through single reduction gearing.

STEAM TURBINES. No. of turbines per set one BHP per set 1688 Steam pressure 41 kg/cm² Steam temperature 450°C
Type of turbines Impulse - 8 wheels.
Particulars of gearing Single reduction helical.
RPM of turbine shaft(s) 6393 PCD of pinion(s) 164,933 mm PCD of wheels(s) 878,692 mm Material of pinion(s) Ni, Cr, electric steel Material of wheel rim(s) electric Carbon steel Has rotor been dynamically balanced? Yes Diameter of rotor shaft at bearings 88 mm Does the set Include a steam condenser? - Is an emergency governor fitted? Yes No. and purpose of attached pumps 3 lub-oil (one driven, one emergency and one hand) Has the set been tested in the shop? Yes If so, for how long at full power? reduced load only Was the governing tested and found satisfactory? Yes Was the set tested with driven machinery attached? Yes
Identification marks LLOYDS or LLOYDS TEST, initials, date and particulars Particulars of driven machinery Alternator
Nos. 137.247 and 137.248 respectively for above engine numbers A.C. 3 phase
60 c.s. 450 Volts 1200 r.p.m. 1125 KVA (900 KW at cos ϕ = 0,8)

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 Vln. - report 7 b attached.
For generators under 100 Kw., has Makers' Certificate been obtained? - Are Certificates attached? -

The foregoing description is correct.

Pour le Président Directeur Général
Le Directeur Commercial,

Manufacturer

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. 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 electrical generating machinery has been constructed under Special Survey in accordance with the Rules, approved plans and the Secretary's letters; quality of materials and workmanship is good.

This machinery has been dispatched to Dunkirk for installation in the ship, final testing and completion in accordance with the Rules.

Survey Fee 247.500 Fr

Expenses 9.600 Fr

Date when a/c rendered 15th September, 1959.

E.L.Green for J.H.Beiger & Self.

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)

conditions.

Engineer Surveyor to Lloyd's Register

011610-011618-0083

Date of writing report.....

Received London

Port

No

Survey held at

No. of visits

First date.

Last date

Name of Ship.....
 (Or Contract No. if name unknown).
 Ship Built at..... by..... when..... Yard No.....
 Auxiliary Engines or Gas Turbines made at..... by..... when..... Eng. Nos.....
 Total No. of sets and description (including type name)..... Stroke.....

INTERNAL COMBUSTION RECIPROCATING ENGINES.

No. of cylinders per engine..... *Dia. of cylinders*..... *Stroke*.....

2 or 4 stroke cycle..... *Maximum approved BHP*..... *at*..... *RPM*..... *Corresponding MIP*..... *Maximum pressure*.....

Fuel..... *Are cylinders arranged in Vee or other special formation?*.....

crankshafts per engine..... *Is engine of opposed piston type?*..... *No. and type of mechanically driven scavenge pump*.....

per engine..... *No. of exhaust gas driven blowers or superchargers per engine*..... *Is welded*.....

used for: Bedplate?..... *Entablature?*..... *Total Internal volume of crankcase (if 20 cu. ft. or over)*..... *No. and*.....

crankcase explosion relief devices..... *Are flame guards or traps fitted?*..... *Cooling medium for: Cylinders*.....

Pistons..... *No. of attached pumps:* *F.W. cooling*..... *S.W. cooling*..... *Lubricating oil*..... *How is engine started*.....

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

inner edges of bearings in way of cranks..... Crankshaft: Built, semi-built, solid. Material of crankshaft.....

minimum tensile strength..... Dia. of pins..... Journals..... Breadth of webs at mid throw.....

thickness..... If shrunk, radial thickness around eyeholes..... Dia. of flywheel..... Weight.....

weights fitted?..... Total weight..... Rad. of gyration..... Dia. of flywheel shaft.....

Has each engine been tested in shop?..... How long at full power?..... Was it tested with driven machinery attached?.....

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

Date of approval of shafting..... Identification marks on shafting.....

Particulars of driven machinery

Port and No. of Certificate for Starting Air Receivers

Port and No. of Certificate for Starting No. 1000000

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 „ „ „ „ „

(A small diagram should be attached showing gas cycle)

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.....

turbines started?..... Are the turbines operated in conjunction with free piston gas generator.....

Total No. of free piston gas generators..... Dia. of working pistons..... Dia. of compressor pistons..... No. of

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

attached?..... Particulars of gearing..... Particulars of driven machinery.....

Date of approval of plans..... Identification marks.....

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)

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 State quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained

Survey Fee.

Expenses

Date when a/c rendered.

Engineer Survey

Date when a/c rendered.....

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the..... under full work
at..... in a proper manner and found satisfactory when tested on the (date).....
..... Engineer Surveyor

Engineer Survey