

Rpt. 4c

Date of writing report..... Received London..... Port..... Kobe..... No..... FE-5803
Survey held at..... Kobe..... No. of visits..... 50..... First date..... 9-3-57..... Last date..... 20-5-58

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..... Yokohama, Japan..... by..... Mitsubishi Nippon H.I. Ltd. when..... Yard No. 823
Auxiliary turbines made at..... Kobe, Japan..... by..... Mitsubishi H.I. Reorganized Ltd., when..... May 1958 Eng. Nos. 1458, 1459
Total No. of sets and description.....
2 sets 1100 SHP Mitsubishi-Westinghouse All Impulse Single Reduction Geared
Steam Turbines for 750 KVA A.C. Electric Generator

STEAM TURBINES. No. of turbines per set..... 1..... S..... BHP per set..... 1100..... Steam pressure..... 41.1 kg/cm²..... Steam temperature..... 449°C
Type of turbines..... Mitsubishi-Westinghouse All Impulse Single Reduction Geared Turbine
Particulars of gearing..... Double Helical Gear (No. of Teeth..... 45; 231..... Spiral angle..... 40°-2'-12"..... Pressure angle..... 14½"..... D.P. 11 (Hob)
RPM of turbine shaft(s)..... 9038..... PCD of pinion(s)..... 138.73 mm..... PCD of wheel(s)..... 696.68 mm..... Material of pinion(s)..... Ni-Steel Forging..... Material of wheel rim(s)..... Steel Forging..... Has rotor been dynamically balanced?..... Yes..... Diameter of rotor shaft at bearings..... 55 mm..... Does the set include a steam condenser?..... Yes..... Is an emergency governor fitted?..... Yes..... No. and purpose of attached pumps..... 2 { 1 -- Main L.O. gear pump..... Has the set been tested in the shop?..... Yes..... If so, for how long at full power?..... 4 hours..... Was the governing tested and found satisfactory?..... Yes..... Was the set tested with driven machinery attached?..... Yes
Identification marks..... LLOYD'S KOB M.No.1458 Sm 20-5-58..... Particulars of driven machinery..... A.C. Generator
..... LLOYD'S KOB M.No.1459 Sm 20-5-58..... (Rated Output..... 750 KVA
..... (Speed of Generator..... 1800 R.P.M.
..... (Voltage..... 450 V.
..... (Current..... 962 A.

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.....

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.

K. Ogata, Manager of Inspection Dept., Manufacturer
KOBESHIPYARD & ENGINE WORKS,

MITSUBISHI HEAVY-INDUSTRIES, REORGANIZED, LIMITED.

Is this machinery duplicate of a previous case?..... Yes..... If so, which?..... Yokohama Yard No.818 (S.S. "NEFELI")

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 steam turbines have been constructed under special survey in accordance with the Rules, approved plans and secretary's letters.

The materials and workmanship are sound and good.

These turbo generator sets have been examined under full working condition in the shop and found satisfactory.

Survey Fee..... ¥128,000.-

Expenses.....

Date when a/c rendered..... JUL. - 7. 1958

K. H. Manam, 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..... S.S. "ALTHEA"
at..... YOKOHAMA..... in a proper manner and found satisfactory when tested on the (date)..... 18th Oct. 1958..... under full working conditions.

K. H. Manam, Engineer Surveyor to Lloyd's Register