

Rpt. 4c

Date of writing report 26th May, 1959.

Survey held at Kobe

Received London

Port KOBE

15 JAN 1960  
No. FE-6717

No. of visits 65

First date 17th August, '57 Last date 25th May, 1959.

### FIRST ENTRY REPORT ON AUXILIARY STEAM TURBINE OR STEAM RECIPROCATING ENGINES

Name of Ship s.s. "GEKKO MARU"  
 (Or Contract No. if name unknown) Owners Tokyo Tanker Co., Ltd.  
 (Or Consignees) Kobe Shipyard & Engine Works  
 Ship Built at Kobe, Japan by Kawasaki Dockyard Co., Ltd. when 1959-10 Yard No. 972  
 Auxiliary turbines or engines made at Kobe, Japan by Mitsubishi H.I. Reorg. Ltd. when 1959-4 Eng. Nos. 1638, 1639  
 Total No. of sets and description 2 sets 1140 S.H.P. Mitsubishi Westinghouse All Impulse Single  
Reduction Geared Steam Turbines for 800 KVA A.C. Electric Generator.

STEAM TURBINES. No. of turbines per set 1 S BHP per set 1140 Steam pressure 41.1kg/cm<sup>2</sup> Steam temperature 449°C  
 Type of turbines Mitsubishi Westinghouse All Impulse Single Reduction Geared Turbine  
 Particulars of gearing Double Helical Gear (No. of Teeth 37:278 Spiral angle 40°-2'-12"  
 (Tooth Windth 110mm x 2 Pressure angle 14 1/2" D.P. 11 (Hob)  
 RPM of turbine shaft(s) 9016 PCD of pinion(s) 111.59 mm PCD of wheel(s) 838.43 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 (1 - Aux. L.O. Gear Pump for Starting) 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.1638 JN 25-4-59 LR Particulars of driven machinery A.C. Generator  
LLOYD'S KOB M.NO.1639 JN 25-4-59 LR (Rated Output 800 KVA  
 (Speed of Generator 1200 R.P.M.  
 (Voltage 450 V.  
 (Current 1026 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 Kobe Certificate No.M-55915  
 For generators under 100 Kw., has Makers' Certificate been obtained? Are Certificates attached?

The foregoing description is correct.

*for H. Shimizu*  
 H. SHIMIZU, GENERAL MANAGER Manufacturer  
 KOBE SHIPYARD & ENGINE WORKS.  
 MITSUBISHI HEAVY INDUSTRIES REORGANIZED, LIMITED.  
 s.s. "ARCTIC SEA" "BERING SEA"

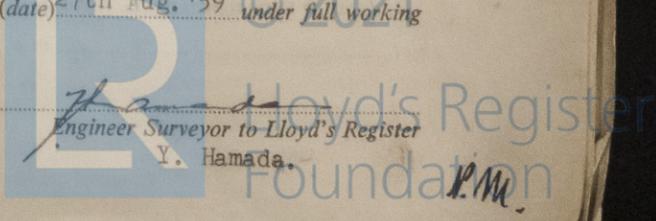
Is this machinery duplicate of a previous case? Yes If so, which?

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 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  
 Expenses  
 Date when a/c rendered

*R.D. Sutherst & J. Nonomura*  
 R.D. Sutherst, & J. Nonomura.  
 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. "GEKKO MARU"  
 at Kawasaki Dockyard, Kobe in a proper manner and found satisfactory when tested on the (date) 27th Aug. '59 under full working conditions.



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