9 APR 1959

Pt. 4c

e of writing report 25th February, 1959 Received London ..... Port KOBE No. FE-6482

vey held at Tamano No. of visits 87 First date 16-9-57 Last date 9-2-59

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

ame of Ship M.V. "OHMINESAN MARU" Owners Mitsui Steamship Co.,Ltd. (Or Consignees)
r Contract No. if name unknown).

ip Built at Tamano, Japan by Mitsui Shipbuilding & Eng., Co.,Ltd. when 1959-2 Yard No. 635

uxiliary Engines ~~xxxxxxxxxx~~ made at Tamano, Japan by Mitsui Shipbuilding & Eng., Co.,Ltd. when 1959-2 Eng. Nos. 740,741,742

tal No. of sets and description (including type name) 3 sets Mitsui B & W DE525 MTBH 40

NTERNAL COMBUSTION RECIPROCATING ENGINES. *No. of cylinders per engine* 5 *Dia. of cylinders* 245mm *Stroke* 400mm *or 4 stroke cycle* 4 *Maximum approved BHP* 380 *at* 450 *RPM Corresponding MIP* 9.6kg/cm2 *Maximum pressure* 55 kg/cm2 *uel* Diesel Oil *Are cylinders arranged in Vee or other special formation?* - *If so, No. of ankshafts per engine* - *Is engine of opposed piston type?* - *No. and type of mechanically driven scavenge pumps or blowers r engine* - *No. of exhaust gas driven blowers or superchargers per engine* 1 *Is welded construction ed for: Bedplate?* No *Entablature?* No *Total internal volume of crankcase (if 20 cu. ft. or over)* 77.5 cub.ft. *No. and total area of ankcase explosion relief devices* 2-56.4 sq.in. *Are flame guards or traps fitted?* Yes *Cooling medium for: Cylinders* Fresh Water *stons* - *No. of attached pumps: F.W. cooling* - *S.W. cooling* - *Lubricating oil* 1 *How is engine started?* Compressed air

HAFTING. *Is a damper or detuner fitted?* No *No. of main bearings* 6 *Are bearings of ball or roller type?* No *Distance between ner edges of bearings in way of cranks* 315mm *Crankshaft: ~~xxxx~~ semi-built, ~~solid~~ Material of crankshaft* Forged Steel & Cast Steel *Approved inimum tensile strength* 44kg/mm2 *Dia. of pins* 170mm *Journals* 170mm *Breadth of webs at mid throw* 290mm *Axial ickness* 90mm *If shrunk, radial thickness around eyeholes* 82.5mm *Dia. of flywheel* 1350mm *Weight* 2246 kgs *Are balance eights fitted?* Yes *Total weight* 183 kgs *Rad. of gyration* 246mm *Dia. of flywheel shaft* -
Has each engine been tested in shop? Yes *How long at full power?* 4 hours *Was it tested with driven machinery attached?* Yes *Was the overning tested and found satisfactory?* Yes *Date of approval of torsional vibration characteristics (for engines of 150 BHP and over)* 14-5-58
Date of approval of shafting 5-4-58 *Identification marks on shafting* LLOYD'S KOB No.M-CK 471 AJ LR 18-9-58 LLOYD'S KOB No.M-CK 472 AJ LR 25-9-58 LLOYD'S KOB No.M-CK 473 AJ LR 30-9-58 415G.
Particulars of driven machinery 320 kVA A.C. Generator 16 poles, 440 volts, 420 amp.s 450 RPM 60 cycles
Port and No. of Certificate for Starting Air Receivers KOBE AR-53073

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 urbines 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 er 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 ttached?* ..... *Particulars of gearing* .....
ate of approval of plans ..... *Identification marks* ..... *Particulars of driven machinery* .....

LECTRIC GENERATORS. *Port and No. of Certificate for generators of 100 Kw. and over* KOBE - M-50094
or generators under 100 Kw., has Makers' Certificate been obtained? Yes *Are Certificates attached?* Yes

The foregoing description is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable)

MITSUI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.
S. Sakato
Senior Managing Director. *Manufacturer*

s this machinery duplicate of a previous case? Yes *If so, which?* m.v. "MEGUROSAN MARU" (Yard No.630 Mitsui).

GENERAL REMARKS. *State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letters. tate quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.*

These Oil Engine Generator sets have been constructed under Special Survey in accordance with the Rules, pproved plans and Secretary's letters. The workmanship and materials have been found satisfactory. These sets ave been examined during and after shop-trials with good results and have been satisfactory fitted in the ship. ank case explosion relief valves are fitted as per Rules.

urvey Fee ¥168,000.- *xpenses* / *when a/c rendered* .....

A. Jacobs & K. Tabuchi
Engineer Surveyor to Lloyd's Register
A. Jacobs & K. Tabuchi.

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the M.V. "OHMINESAN MARU" Tamano *in a proper manner and found satisfactory when tested on the ~~xxxx~~ board under full working conditions.*

A. Jacobs & K. Tabuchi
Engineer Surveyor to Lloyd's Register

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