Rpt. 4c

16 JAN 1959

Date of writing report ..... Received London ..... Port YOKOHAMA No. 2786 B

Survey held at Tokyo and Yokohama No. of visits Tokyo 6, Yokohama First date 26th Dec. 1957 Last date 15th May, 1958

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship ..... *Owners (Or Consignees)* .....
(Or Contract No. if name unknown).
Ship Built at Yokohama *by* Yokohama Shipyard & Engine Works, Mitsubishi Nippon Heavy Ind. Ltd. *when* ..... *Yard No.* 823
Auxiliary Engines or Gas Turbines made at Tokyo *by* Suction Gas Engine Mfg., Co., Ltd. *when* 1958-5 *Eng. Nos.* 6MD-11
Total No. of sets and description (including type name) 1 - 6 MD, Vertical, Single Acting, 4 Stroke Cycle, Trunk Piston Type

INTERNAL COMBUSTION RECIPROCATING ENGINES. *No. of cylinders per engine* 6 *Dia. of cylinders* 180mm *Stroke* 220 mm *2 or 4 stroke cycle* 4 *Maximum approved BHP* 150 *at* 720 *RPM* *Corresponding MIP* 6.94 kg/cm2 *Maximum pressure* 60 kg/cm2 *Fuel* Heavy 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 *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)* 17.6 cu.ft. *No. and total area of crankcase explosion relief devices* 2 x 81.7 cm2 *Are flame guards or traps fitted?* No *Cooling medium for: Cylinders* Sea Water *Pistons* None *No. of attached pumps: F.W. cooling* – *S.W. cooling* One *Lubricating oil* One *How is engine started?* by compressed air, (automatic starting device fitted)

SHAFTING. *Is a damper or detuner fitted?* No *No. of main bearings* 7 *Are bearings of ball or roller type?* No *Distance between inner edges of bearings in way of cranks* 225 mm *Crankshaft: Built, semi-built, solid.* *Material of crankshaft* Electric furnace steel *Approved minimum tensile strength* 36 ton/sq.in. *Dia. of pins* 110mm *Journals* 125mm *Breadth of webs at mid throw* 176.8 mm *Axial thickness* 59.5 mm *If shrunk, radial thickness around eyeholes* – *Dia. of flywheel* 1000mm *Weight* 770 kg. *Are balance weights fitted?* No *Total weight* – *Rad. of gyration* – *Dia. of flywheel shaft* 125mm
Has each engine been tested in shop? Yes *How long at full power?* 4 hrs. *Was it tested with driven machinery attached?* Yes *Was the governing tested and found satisfactory?* Yes *Date of approval of torsional vibration characteristics (for engines of 150 BHP and over)* 21-9-56 8/4/58
Date of approval of shafting 10-8-56 *Identification marks on shafting* LLOYD'S KOB NO.M.B.-CK476 H.N. 14-12-57 K.M. 12-3-58 YKA 3597
Particulars of driven machinery 125 KVA A.C.Generator, 3 Phase, 60cycle, 450 Volt, 160 Amp. P.F. 0.8, 10 Poles, Horizontal, Drip Proof, Self ventilated, Fuji Denki Seizo K.K., Kawasaki Wks. Kawasaki, Japan, Mfg.No. 215466A
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* Yka M-4746
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)

SUCTION GAS ENGINE MANUFACTURING CO., LTD. H. Hashimoto *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.*

The Electric generator set has been constructed under special survey in accordance with the Rules, Approved plans and Secretary's letters.
The quality of materials and workmanship are sound and good.
The electric generator sets has been examined under full working condition in the shop and found satisfactory.
Crank case explosion relief devices were fitted as per Rules.

Survey Fee ¥26,000.- charged 18th June, 1958 Suction Gas Engine Mfg. Co.
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 S.S. "ALTHEA" *at* YOKOHAMA *in a proper manner and found satisfactory when tested on the (date)* 18th Oct., 1958 *under full working conditions.*

Engineer Surveyor to Lloyd's Register

© 2021 Lloyd's Register Foundation

011544-011554-0245