

Rpt. 4c

Date of writing report 31st May, 1963 Received London 30 JAN 1963 Port KOBE No. FE-11640
Survey held at Osaka No. of visits 8 First date 21st Jan., 1963 Last Date 30th May, 1963

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship m.v. "ORSHA" Owners M/V Sudoimport, Moscow, U.S.S.R.
(Or Contract No. if name unknown).
Ship Built at Osaka, Japan by Hitachi Shipbuilding & Eng. Co., Ltd., Sakura Jima Shipyard when 11-1963 Yard No. 3976
Auxiliary Engines McCormick Diesel at Osaka, Japan by Daihatsu Kogyo K.K. when May, 1963 Eng. Nos. 620100
Total No. of sets and description (including type name) 1 off 6 PS-20 Type 4 S.C. S.A. Diesel Engine

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine 6 Dia. of cylinders 200 mm Stroke 250 mm
2 or 4 stroke cycle 4 Maximum approved BHP 207.939 at 750 RPM Corresponding MIP 6.69 kg/cm² Maximum pressure 60 kg/cm²
Fuel Diesel 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 None No. of exhaust gas driven blowers or superchargers per engine None Is welded construction
used for: Bedplate? No Entablature? No Total internal volume of crankcase (if 20 cu. ft. or over) 23.1 cub.ft No. and total area of
crankcase explosion relief devices 340.0194 M² Are flame guards or traps fitted? Yes Cooling medium for: Cylinders Fresh Water
Pistons None No. of attached pumps: F.W. cooling None S.W. cooling None Lubricating oil 1 How is engine started? By
Compressed Air F.O. supply 1

SHAFTING. Is a damper or detuner fitted? No No. of main bearing 7 Are bearing of ball or roller type? No Distance between
inner edges of bearings in way of cranks 217 mm Crankshaft: Forged Steel solid. Material of crankshaft Forged Steel Approved
minimum tensile strength 55 kg/cm² Dia. of pins 135 mm Journals 155 mm Breadth of webs at mid throw 220 mm Axial
thickness 55 mm If shrunk, radial thickness around eyeholes - Dia. of flywheel 950 mm Weight 555 kg Are balance
weights fitted? Yes Total weight 82 kg Rad. of gyration 245 mm 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
governing tested and found satisfactory? Yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) 13-3-63
Date of approval of shafting 23-1-63 Identification marks on shafting No. MB-CK 982 KY 5-3-63 LR
Particulars of driven machinery 150 KVA x 400V x 50 C/S A.C. Generator

Port and No. of Certificate for Starting Air Receivers Kobe AR-86707

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 - " " " " " " " "
LP - at - " " " " " " " "
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 Yokohama No. M-9220
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)

K. Deguchi
K. Deguchi Manufacturer
Chief Inspector, Daihatsu Kogyo K.K.
Is this machinery duplicate of a previous case? Yes If so, which? Hitachi S. No. 3975 m.v. "OREKHOV"

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 engine has been constructed under Special Survey in accordance with the Rules, the approved plans, and the Secretary's letters. The material and workmanship are good. On completion, the engine has been examined under full working conditions at shop and found satisfactory.

Survey Fee ¥38,450.-
Expenses 3,000.-
Date when a/c rendered JUN - 3 1963

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the m.v. "ORSHA"
at Sakura Jima, Osaka in a proper manner and found satisfactory when tested on the (date) 5-11-63 under full working conditions.

K. Yamazaki, S. Hashiguchi & K. Ogata
Engineer Surveyor to Lloyd's Register
L.O. Christensen

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