10 OCT 1963

Rpt. 4c

Date of writing report 19.9.63 Received London ..... Port HAMBURG No. 12 987

Survey held at Elmshorn No. of visits 7 First date 18.6.63 Last date 19.8.63

FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship "IWTA SITALAKHYA" *Owners* Inland Water Transport Authority
(Or Contract No. if name unknown). *(Or Consignees)* East Pakistan

Ship Built at Elmshorn *by* Messrs. Kremer Sohn Klöckner-Humboldt *when* 1963 *Yard No.* 1101

Auxiliary Engines or Gas Turbines made at Köln *by* Messrs. Deutz A.G. *when* 1963 *Eng. Nos.* 3454876/78 3454864/66

Total No. of sets and description (including type name) two oil engines Type A3M514

INTERNAL COMBUSTION RECIPROCATING ENGINES. *No. of cylinders per engine* 3 *Dia. of cylinders* 110 mm *Stroke* 140 mm *2 or 4 stroke cycle* 4 *Maximum approved BHP* 41 *at* 1500 *RPM* *Corresponding MIP* ..... *Maximum pressure* ..... *Fuel* ..... *Are cylinders arranged in Vee or other special formation?* ..... *If so, No. of crankshafts per engine* ..... *Is engine of opposed piston type?* ..... *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)* ..... *No. and total area of crankcase explosion relief devices* ..... *Are flame guards or traps fitted?* ..... *Cooling medium for: Cylinders* SW *Pistons* ..... *No. of attached pumps: F.W. cooling* – *S.W. cooling* 1 *Lubricating oil* 1 *How is engine started?* one engine hand started and one engine electrically started

SHAFTING. *Is a damper or detuner fitted?* ..... *No. of main bearings* ..... *Are bearings of ball or roller type?* ..... *Distance between inner edges of bearings in way of cranks* ..... *Crankshaft: Built, semi-built, solid.* *Material of crankshaft* ..... *Approved minimum tensile strength* ..... *Dia. of pins* ..... *Journals* ..... *Breadth of webs at mid throw* ..... *Axial thickness* ..... *If shrunk, radial thickness around eyeholes* ..... *Dia. of flywheel* ..... *Weight* ..... *Are balance weights fitted?* ..... *Total weight* ..... *Rad. of gyration* ..... *Dia. of flywheel shaft* ..... *Has each engine been tested in shop?* ..... *How long at full power?* ..... *Was it tested with driven machinery attached?* ..... *Was the governing tested and found satisfactory?* ..... *Date of approval of torsional vibration characteristics (for engines of 150 BHP and over)* ..... *Date of approval of shafting* ..... *Identification marks on shafting* ..... *Particulars of driven machinery* one 12 kW generator and one general service pump each set

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* ..... *IP* ,, ... *at* ..... ,, *IP* ,, ,, ,, ... ,, ... *LP* ,, ... *at* ..... ,, *LP* ,, ,, ,, ... ,, ... *(A small diagram should be attached showing gas cycle)* *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* ..... *For generators under 100 Kw., has Makers' Certificate been obtained?* yes *Are Certificates attached?* see Rpt. 13

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

..... *Manufacturer*

Is this machinery duplicate of a previous case? yes *If so, which?* Messrs. Kremer Sohn Yard No. 1100 - "IWTA GUMTI"

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.*

Survey Fee .....
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 "IWTA SITALAKHYA" *at* Elmshorn *in a proper manner and found satisfactory when tested on the (date)* 19.8.63 *under full working conditions.*

Engineer Surveyor to Lloyd's Register

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