

Rpt. 4c

Received London..... ---

# Port of Augsburg

No. 1480

Survey held at.....Munich

No. of visits ..... two

First date 4th April, 61

20th April, 1961

# FIRST ENTRY REPORT ON AUXILIARY INTERNAL COMBUSTION ENGINES

Name of Ship.....	---	Owners.....	California Shipping Co.
(Or Contract No. if name unknown).....		(Or Consignees).....	
Ship Built at.....	Uddevalla / Sweden	by.....	Uddevallavarvet
		when.....	1961
Auxiliary Engines or <del>Gas Turbines</del> made at.....	Munich	by.....	Südd. Bremsen A.G.
		when.....	1961
Total No. of sets and description (including type name).....	TRHS 518 A	Yard No.....	204
		Eng. Nos.....	97 886

**INTERNAL COMBUSTION RECIPROCATING ENGINES.** No. of cylinders per engine... 8 Dia. of cylinders... 140 mm Stroke... 180 mm  
2 or 4 stroke cycle... 4 Maximum approved BHP... 276 at 1200 RPM Corresponding MIP... 6.5 kg/cm<sup>2</sup> Maximum pressure... 60 kg/cm<sup>2</sup>  
Fuel... Gas 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. and type of mechanically driven scavenge pumps or blowers  
per engine... --- No. of exhaust gas driven blowers or superchargers per engine... one Is welded construction  
used for: Bedplate? yes 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... water  
Pistons... --- No. of attached pumps: F.W. cooling... --- S.W. cooling... --- Lubricating oil... 1 How is engine started? electrically

**SHAFTING.** Is a damper or detuner fitted? no No. of main bearings 9 Are bearings of ball or roller type? --- Distance between inner edges of bearings in way of cranks 136 mm Crankshaft: Built, semi-built, solid. Material of crankshaft SM Steel, 37 Cr4 Approved minimum tensile strength --- Dia. of pins 100 mm Journals 115 mm Breadth of webs at mid throw 152 mm Axial thickness 32 mm If shrunk, radial thickness around eyeholes --- Dia. of flywheel 640 mm Weight 212 kgs Are balance weights fitted? yes Total weight 31.2 kg Rad. of gyration 106.5 mm Dia. of flywheel shaft --- Has each engine been tested in shop? yes How long at full power? 5 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) 22.10.1959 Date of approval of shafting 22.6.60 Identification marks on shafting LLOYD'S AUG AL61/397 HKS 7.10.60 C 221717 Particulars of driven machinery 125 KVA; 1200 RPM; 160 amps; 450/260 volts., No. 2564

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. Augsburg Certificate No. 61/835  
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.


MOTOREN-WERKE MANNHEIM AG

Lieferwerk München

SÜDDEUTSCHE BREMSEN A.G. *Manufacturer*

Is this machinery duplicate of a previous case? yes If so, which? Yard No. 202

**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.*

This heavy oil auxiliary engine has been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans. The material used was tested and the workmanship was found satisfactory. The engine was tested running on makers' test bed under full-, over-, and partial loads with satisfactory results. In my opinion the engine can be recommended for the notation  L.M.C. (With Date) when the whole machinery has been satisfactorily fitted on board and tried under full working conditions.

test 100.-  
Survey Fee DM ~~222x~~ 350.-

Survey Fee.....	DM 525.-	550.-
Same	40.-	
Expenses .....	35.-	DM 500.-525.-

Date when a/c rendered.....5.5.1961

For Mr. Fincke:-

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 ASA V. © 20  
at CODEVALLA in a proper manner and found satisfactory when tested on the (date) 21/3/62 under full working conditions.

*Engineer Surveyor to Lloyd's Register*

**EINLAGE**  
**Nr. 454**

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