

# REPORT ON OIL ENGINE MACHINERY.

No. 19535.

22 JAN 1953

Received at London Office

Writing Report 13th January 1953 When handed in at Local Office 20th Jan. 1953 Port of Gothenburg

Survey held at Uddevalla Date, First Survey 17th March, 1952 Last Survey 3rd January 1953 Number of Visits 21

Screw vessel "ASLAUG TORM" Tons Gross 10270 Net 5946

at Uddevalla By whom built Uddevallavarvet A-B. Yard No. 126 When built 1953

made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 501539 When made 1952

Boilers made at Hamburg-Altona By whom made Ottensener Eisenwerk A.G. Boiler No. 5327-8 When made 1952

Horse Power { Maximum 6300 Service 6300 Owners D/S Tom A/S Port belonging to Copenhagen

as per Rule 1260 (Old scale 1214) Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

for which vessel is intended International, Tanker

ENGINES, &amp;c. — Type of Engines M.A.N. Standard Type K 7 Z 78/140 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders --- Diameter of cylinders --- Length of stroke --- No. of cylinders --- No. of cranks ---

Indicated Pressure --- Span of bearings (i.e., distance between inner edges of bearings in

of a crank) --- Is there a bearing between each crank --- Revolutions per minute { Maximum --- Service ---

Wheel dia. --- Weight --- Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) --- Means of ignition --- Kind of fuel used ---

" " " " balance wts. ( " " " " ) ---

Solid forged dia. of journals as per Rule --- Crank pin dia. --- Crank webs Mid. length breadth --- Thickness parallel to axis ---

Semi built dia. of journals as fitted --- Crank pin dia. --- Crank webs Mid. length thickness --- shrunk Thickness around eye-hole ---

All built dia. of journals as fitted --- Crank pin dia. --- Crank webs Mid. length thickness --- Thickness around eye-hole ---

Propeller Shaft, diameter as per Rule --- Intermediate Shafts, diameter as fitted 400 mm. Thrust Shaft, diameter at collars as per Rule ---

Shaft, diameter as fitted --- Screw Shaft, diameter as fitted 443 mm. Is the screw shaft fitted with a continuous liner Yes

Cylinder Liners, thickness in way of bushes as fitted 22 mm. Thickness between bushes as fitted 21 mm. Is the after end of the liner made watertight in the

liner boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length

liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-

water-soluble If two liners are fitted, is the shaft lapped or protected between the liners --- Is an approved Oil Gland fitted at the after

stern tube No If so, state type --- Length of bearing in Stern Bush next to and supporting propeller 1800 mm.

Propeller, dia 5360 mm. Pitch 4235 mm. No. of blades 4 Material Bronze whether moveable No Total developed surface 12.14 sq. metres

Moment of inertia of propeller including entrained water (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) --- Kind of damper, if fitted None fitted

Method of reversing Engines Compressed air as a governor or other arrangement fitted to prevent racing of the engine Yes Means of

operation Forced Thickness of cylinder liners --- Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

and with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

the engine Led to a funnel Cooling Water Pumps, No. and how driven 3 electric motors Working F.W. 1 à 315 M<sup>3</sup>/hourà 315 M<sup>3</sup>/hour Spare F.W. and S.W. 1 à 315 M<sup>3</sup>/hour the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Pumps worked from the Main Engines, No. and capacity None Can one be overhauled while the other is at work ---

connected to the Main Bilge Line (No. and capacity of each 1 Butterworth pump 100 tons/h., 1 bilge pump 30 tons/h., 1 condenser pump 270 tons/hour

How driven Steam Steam Steam

Cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements ---

Pumps, No. and capacity 1 à 50 tons/h. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2, 220 M<sup>3</sup>/hour.

Independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions ---

size:—In machinery spaces 3 x 3½", 2 x 2½" fwd In pump room 2 x 2½" from dry

cargo hold, 1 x 2½" Midship pump room 2 x 3", Main pump room 2 x 3".

Bilge Suctions to the engine room bilges, No. and size 1 x 3½" to bilge pump, 1 x 5" to Butterworth, 1 x 8 (emergency) circ. pump

the bilge suction pipes in holds well fitted with strum-boxes. Yes Are the bilge suction pipes in the machinery spaces led from easily

accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. Yes

Sea Connections fitted direct on the skin of the Ship tank top Are they fitted with valves or cocks. Yes Are they fixed

high on the ship's side to be seen without lifting the platform plates. Not all Are the overboard discharges above or below the deep water line. Above

each fitted with a discharge valve always accessible on the plating of the vessel. Yes Are the blow off cocks fitted with a spigot and brass covering plate. Yes

Pipes pass through the bunkers. No coal bunkers How are they protected. ---

Pipes pass through the deep tanks. Only bilge pipes from cofferdam Have they been tested as per Rule. Yes

All pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times. Yes

Arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery

space or from one compartment to another. Yes Is the shaft tunnel watertight tunnel Is it fitted with a watertight door. --- worked from. ---

Good vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork. ---

Air Compressors, No. None No. of stages --- diameters --- stroke --- driven by ---

Primary Air Compressors, No. 1 No. of stages 2 Capacity: 230 M<sup>3</sup>/hour at a discharge pressure of 30 kg/cm<sup>2</sup> driven by El. motorAuxiliary Air Compressors, No. 1 No. of stages 2 Capacity: 115 M<sup>3</sup>/hour stroke --- driven by El. motor

Provision is made for first charging the air receivers. Above compressor. Electric power from steam driven generator

Driving Air Pumps or Blowers, No. 1 How driven Main engine

Primary Engines Have they been made under survey. Yes Engine Nos. 430794, 430795 and 430796

Makers name Maschinenfabrik Augsburg-Nürnberg, Position of each in engine room No. 1: Starboard side of the

engine room floor, No. 2: Port side forward, No. 3: port side aft. Report No. Augsburg F.E. Report No. 167.

002602-002610-0024

**AIR RECEIVERS:** - Have they been made under survey Yes State No. of ~~London~~ certificate Glasgow C.95953  
safety valve on the compy. disch. line and C.96602  
 State full details of safety devices Melting plugs on the receivers and also on manoeuvring compressors.

Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes  
 Injection Air Receivers, No. --- Cubic capacity of each --- Internal diameter --- thickness ---  
 Seamless, welded or riveted longitudinal joint --- Material --- Range of tensile strength --- Working pressure ---  
 Starting Air Receivers, No. 2 Total cubic capacity 2 x 264 cub. feet Internal diameter 5' - 4.5/8" thickness 1.17/32"  
 Seamless, welded or riveted longitudinal joint Welded Material S.M. Steel Range of tensile strength --- Working pressure 441 lb

**IS A DONKEY BOILER FITTED** Yes If so, is a report now forwarded Yes. Also Hamburg First Entry Report No. 19  
 Is the donkey boiler intended to be used for domestic purposes only No

**PLANS.** Are approved plans forwarded herewith for shafting London 29.10.1951 Receivers --- Separate fuel tanks ---  
 (If not, state date of approval)  
 Donkey boilers --- General pumping arrangements 5.5.1952 Pumping arrangements in machinery space 5.5.1952  
 Oil fuel burning arrangements 5.5.1952  
 Have Torsional Vibration characteristics been approved Yes Date and particulars of approval London 9.10.1951

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied Yes State if for "short voyages" only No, intended for Open Sea sea  
 State the principal additional spare gear supplied 1 propeller shaft,

The foregoing is a correct description and the particulars of the installation as fitted are as approved for  
 sional vibration characteristics.

*Handwritten signature and stamp: AUSTRIAN ENGINEERING WORKS, ARTIFABOLAG*

Manufacturer.

Dates of Survey while building  
 During progress of work in shops - ---  
 During erection on board vessel - 17th March, 1952 - 3rd January, 1953  
 Total No. of visits 21

Dates of examination of principal parts - Cylinders --- Covers --- Pistons --- Rods --- Connecting rods ---  
 Crank shaft --- Flywheel shaft --- Thrust shaft --- Intermediate shafts 20/5 & 6/11-52 Tube shaft ---  
 Screw shaft 18.8.1952 Propeller 20.10.1952 Stern tube 4.9.1952 Engine seatings 6.11.1952 Engine holding down bolts 20.11  
 Completion of fitting sea connections 6.10.1952 Completion of pumping arrangements 30.12.1952 Engines tried under working conditions 1.1.  
 Crank shaft, material --- Identification mark --- Flywheel shaft, material --- Identification mark ---  
 Thrust shaft, material --- Identification mark --- Intermediate shafts, material S.M. Steel Identification marks See  
 Tube shaft, material --- Identification mark --- Screw shaft, material S.M. Steel Identification mark ---  
 Identification marks on air receivers 10.10.52, 10.11.52 Spare: S. 126, GH 15.4, S. 12, GH 15.4  
LLOYD'S 1181, 1196  
TP 710 LBS. WP 441 LBS.

Welded receivers, state Makers' Name Charles McNeil, Ltd., Identification marks on intermediate shafts  
LLOYD'S 229 AS 20.5.52 LLOYD'S 6060 AS 6.11.52

Is the flash point of the oil to be used over 150°F Yes  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes  
 Full description of fire extinguishing apparatus fitted in machinery spaces Steam under donkey boilers, 8 x 12 litres foam extinguish  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Oil tanker If so, have the requirements of the Rules been complied with ---  
 What is the special notation desired ---  
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with Not desired

Is this machinery duplicate of a previous case Yes If so, state name of vessel M/T "Astrid Elisabeth", Got.F.E.R

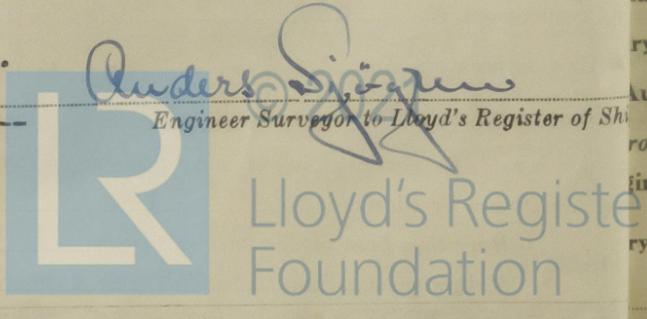
**General Remarks** (State quality of workmanship, opinions as to class, Speed restrictions, &c.) The machinery of this vessel has been  
under the supervision of Lloyd's Surveyors at Augsburg, F.E.Rpt.No.173, and has been fitted on board under my ins  
and to my satisfaction and tested under full power on a trial trip and found to work satisfactorily.  
Material certificates in respect of straight shafting etc. are attached.  
In accordance with the Secretary's letter of the 30th October, 1951, a notice board has been fitted at the  
station, stating the the engine is not to be run continuously between 40 and 50 r.p.m., the tachometer has also  
marked accordingly.

The machinery of this vessel is eligible, in my opinion, to be classed +LMC 12,52, Tail Shaft fitted with  
and 2 Donkey Boilers with 12 kg/cm<sup>2</sup> Working Pressure.

The amount of Entry Fee ... £ ---  
 Special ... Kr. 1960:00 When applied for 20th Jan. 19 53.  
 Exh. gas economiser Kr. 150:00 When received ---  
 Travelling Expenses (if any) Kr. 527:25

Committee's Minute TUES. 24 FEB 1953

Assigned + LMC 1,53 Oil Eng.  
OL 203171/16 (with torsional endorsement)



Gothenburg Office.  
 Certificate (if required) to be sent to  
 26.1.53