

Date of writing report 13/3-1957. Received London Port GOTHENBURG. No. 23115. Survey held at UDDEVALLA. No. of visits In shops 44. On vessel First date 15.9.56. Last date 28.2.57.

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 8/92555 Name Single Screw Motor Tanker "S T A N V A L E" Gross tons 12,029 Owners Stanhope Steamship Co. Ltd. Managers J.A. Billmeir & Co. Ltd. Port of Registry London. Hull built at Uddevalla. By A.-B. Uddevallavarvet Yard No. 160 Year Month When 1957 2 Main Engines made at Uddevalla. By A.-B. Uddevallavarvet Eng. No. 564 When 1957 2 Gearing made at Stockton Chemical Engineers & Riley Boilers Ltd. Blr. Nos. 7467/68 When 1956. Donkey boilers made at Middlesbrough By Riley Boilers Ltd. Machinery installed at Uddevalla. By A.-B. Uddevallavarvet When 1957.

Particulars of restricted service of ship, if limited for classification. Particulars of vegetable or similar cargo oil notation, if required. Is ship to be classed for navigation in ice? No. Is ship intended to carry petroleum in bulk? Yes. Is refrigerating machinery fitted? Yes. If so, is it for cargo purposes? No. Type of refrigerant. Is the refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 1 No. of propellers 1 Brief description of propulsion system ME with straight shafting & direct driven propeller.

MAIN RECIPROCATING ENGINES. Licence Name and Type No. A.-B. Götaverken's type D.M. 760/1500 VGS 8.

No. of cylinders per engine 8 Dia. of cylinders 760 mm. stroke(s) 1500 mm. 2 or 4 stroke cycle 2 SC. Single or double acting Single. Maximum approved BHP per engine 7500 at 112 RPM of engine and 112 RPM of propeller. Corresponding MIP 6,75 kg/cm^2 (For DA engines give MIP top & bottom) Maximum cylinder pressure 49 kg/cm^2 Machinery numeral 1500. Are the cylinders arranged in Vee or other special formation? No. If so, number of crankshafts per engine.

TWO STROKE ENGINES. Is the engine of opposed piston type? No. If so, how are upper pistons connected to crankshaft?

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? Through valves No. and type of mechanically driven scavenge pumps or blowers per engine and how driven 2 scavenge pumps, piston type, to each cylinder, driven by levers from the crosshead.

No. of exhaust gas driven scavenge blowers per engine None. Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

If a stand-by or emergency pump or blower is fitted, state how driven. No. of scavenge air coolers. Scavenge air pressure at full power 80 mm. Hg. Are scavenge manifold explosion relief valves fitted? Yes.

FOUR STROKE ENGINES. Is the engine supercharged? Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per engine. No. of supercharge air coolers per engine. Supercharge air pressure. Can engine operate without supercharger?

TWO & FOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel 2 Inlet Exhaust 1 Starting 1 Safety 1

Material of cylinder covers C.I. Material of piston crowns S.M. Steel Is the engine equipped to operate on heavy fuel oil? Yes.

Cooling medium for: Cylinders Fresh water Pistons Oil Fuel valves Fuel Oil Overall diameter of piston rod for double acting engines.

Is the rod fitted with a sleeve? Is welded construction employed for: Bedplate? Yes. Frames? Yes. Entablature? Is the crankcase separated from the underside of pistons? Yes. Is the engine of crosshead or trunk piston type? Crosshead. Total internal volume of crankcase 126 m^3 No. and total area of explosion relief devices 16x725 cm^2 Are flame guards or traps fitted to relief devices? Guards Is the crankcase readily accessible? Yes. If not, must the engine be removed for overhaul of bearings, etc? Is the engine secured directly to the tank top or to a built-up seating? Built up seating How is the engine started? By compr. air.

Can the engine be directly reversed? Yes. If not, how is reversing obtained? Has the engine been tested working in the shop? Yes. How long at full power? 7 hours.

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 22.3.56. State barred speed range(s), if imposed for working propeller 88-94 RPM. For spare propeller. Is a governor fitted? Yes. Is a torsional vibration damper or detuner fitted to the shafting? No.

Where positioned? Type No. of main bearings 10 Are main bearings of ball or roller type? No. Distance between inner edges of bearings in way of crank(s) 974 mm. Distance between centre lines of side cranks or eccentrics of opposed piston engines. Crankshaft type: Built, semi-built, solid. (State which) Semi-Built.

Diameter of journals 520 mm. Diameter of crankpins Centre 520 mm. Breadth of webs at mid-throw 950 mm. Axial thickness of webs 290 mm. Pins Cast steel Minimum 44 kg/mm^2. If shrunk, radial thickness around eyeholes 250 mm. Are dowel pins fitted? No. Crankshaft material Journals S.M. Steel Approved 44 kg/mm^2. Webs Cast steel Tensile strength 44 kg/mm^2.

Diameter of flywheel 2392,5 mm. Weight 6220 Are balance weights fitted? No. Total weight Radius of gyration. Diameter of flywheel shaft None. Material Minimum approved tensile strength. Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) Integral with thrust shaft.

MAIN GAS TURBINES: Name and Type No.

No. of sets of turbines _____ Open or closed cycle _____ BHP per set _____ at _____ RPM of output shaft _____

How is drive transmitted to propeller shaft? _____

ARRANGEMENT OF TURBINES (A small diagram should be attached showing gas cycle.)

HP drives _____ at _____ RPM HP gas inlet temperature _____ pressure _____

IP drives _____ at _____ RPM IP gas inlet temperature _____ pressure _____

LP drives _____ at _____ RPM LP gas inlet temperature _____ pressure _____

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? _____

How is reversing effected? _____ Are the turbines operated in conjunction with free piston gas generators? _____

Total No. of free piston gas generators _____ Diameter of working pistons _____ Diameter 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 working in the shop? _____ How long at full power? _____

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 4d.)

No. of generators _____ KW per generator _____ at _____ RPM AC or DC? _____ Position _____

No. of propulsion motors _____ SHP per motor _____ at _____ RPM Position _____

How is power obtained for excitation of generators? _____ Motors? _____

REDUCTION GEARING (Reciprocating engines or gas turbines. A small line sketch should be attached showing arrangement of gearing.)

Is gearing of single or double helical type? _____ If single, position of gear thrust bearing _____ Is gearing of epicyclic type? _____

PCD of pinions: First reduction _____ Second reduction _____ PCD of wheels: First reduction _____ Main _____

Material of pinions _____ Tensile strength _____ Material of wheel rims _____ Tensile strength _____

Are gear teeth surface hardened? _____ How are teeth finished? _____ Diameter of pinion journals _____ Wheel shaft journals _____

Are the wheels of welded construction? _____ Is gearcase of welded construction? _____ Has the wheel/gearcase been heat treated on completion of welding? _____ Where is the propeller thrust bearing located? _____ Are gear bearings of ball or roller type? _____

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting give brief description and, for clutches, state how operated _____

Can the main engine be used for purposes other than propulsion when declutched? _____ If so, what? _____

STRAIGHT SHAFTING. Diameter of thrustshaft 520 mm. Material S.M. Steel Minimum approved tensile strength 44 kg/mm²

Shaft separate or integral with crank or wheel shaft? Separate shaft Diameter of intermediate shaft 395 mm. Material S.M. Steel

Minimum approved tensile strength 44 kg/mm² Diameter of screwshaft cone at large end 452 mm. Is screwshaft fitted with a continuous liner? Yes.

Diameter of tube shaft. (If these are separate shafts) _____ Is tube shaft fitted with a continuous liner in way of stern tube _____ Thickness of screwshaft liner at bearings 22,5 mm. Thickness between bearings 16,5 mm. Material of screwshaft S.M. Steel Minimum approved tensile strength 44 kg/mm²

Is an approved oil gland fitted? _____ If so, state type _____ Length of bearing next to and supporting propeller 1850 mm.

Material of bearing Lignum vitae In multiple screw vessels is the liner between stern tube and A bracket continuous? _____ If not, is the exposed length of shafting between liners readily visible in dry dock? _____

PROPELLER. Diameter of propeller 5650 mm. Pitch 4300 mm. Built up or solid Solid Total developed surface 13,52 m²

No. of blades 4 Blade thickness at top of root fillet 193 mm. (0,3 R) Blade material Bronze. Moment of inertia of dry propeller 80300 kgm²

If propeller is of special design, state type _____ Is propeller of reversible pitch type? No. If so, is it of approved design? _____

State method of control _____ Material of spare propeller _____ Moment of inertia _____

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine _____ Can they be declutched? _____

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) 2 off. 5,65 m³/min. el. driven, both in line on port side of the ER floor in front of ME. SOU No. 1973/74.

No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) 2 off of 14 m³ capacity each, on a platform on port side in Engine Room BHM No. C.19853.

How are receivers first charged? By the compressors, current supplied by steam driven generating set. Maximum working pressure of starting air system 25 kg/cm² Are the safety devices in accordance with the Rules? Yes. Has the starting of the main engines been tested and found satisfactory? Yes.

COOLERS. No. of main engine fresh water coolers 1 No. of main engine lubricating oil coolers 2

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure Tanks forming part of the hull structure.

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) None.

INDEPENDENT PUMPS Name below essential pumps, state position and how driven. Give capacity of bilge pumps.	Service for which each pump is connected to be marked thus X																
	SUCTION						DELIVERY										
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cooling	Sea	Feed Tanks	Oil	Emerg. Bilge	Boiler Feed	Salt Water Cooling	Fresh Water Cooling	Oil Fuel Tanks	Fire Main	Lub. Oil	Piston Cooling	Cond.
Main lubr. oil pumps 2 off, port side ER floor, el. driven									X							X	X
Main circ. pumps 2 off SW ps ER floor el. driven 2 off FW					X		X				X	X					
Ballast pump, El. driven, stbd. side ER floor 100 tons/h.	X	X	X	X		X	X						X				
Bilge pump, steam driven, stbd. side ER floor, 40 tons/h.	X	X															
Condenser circ. pump, port side, ER floor steam 240 T/h							X		X								X
Fire & san. pump, el. driven, stbd. side ER. 40 tons/h.						X					X			X			X
Oil fuel transfer pump, El. driven, port side ER. 60 t/h				X									X				
Diesel oil transfer pump, ps, ER. el. driven 35 tons/h.				X									X				
Feed water pumps 2 off, steam ER aft, 15 tons/h each.							X		X								
Emergency fire pump 26 T/h, Fwd. pumproom, Diesel driven						X								X			
Bilge pump, forward pumproom 60 tons/h, steam.	X		X			X											
Bilge pump Main pumprooms, steam, each 100 tons/h.	X		X			X											

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room... Dry cargo hold 2x2 1/2"; 1x4" in fwd. cofferdam; 1x5" in aft cofferdam; 1x2 1/2" in fwd. pumproom; 4x3" each pumproom; Chain locker 2x2"; FP space 2x2"; Hand pump aft: AP space 2x2"; c/d aft 1x2".

No. and size connected to main bilge line in main engine room 3x3"; 2x2 1/2"; ER cofferdam 1x2 1/2". In tunnel ---

In aux. engine room --- Size and position of direct bilge suction in machinery spaces 1x5" to stbd. fwd. Bilge also 1-4" P. Foxplan Yes.

Size and position of emergency bilge suction in machinery spaces 1x8" under Main Engine.

Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? Yes. Do the piping arrangements comply with the Rules including special requirements for ships carrying petroleum in bulk, ~~or in bulk~~ (strike out words not applicable). Yes.

STEAM & OIL ENGINE AUXILIARIES

Position of each	Type	Made by	Port and No. of Rpt. or Cert.	Driven Machinery (For electric generators, slate output)
Stbd. forward	Heavy oil engine.	Uddevallavarvet	Rpt. 4 C -	1-200 KW ESAB generator.
Stbd. aft	- " -	A.-B.	attached.	1-2" KW Esab generator.
Port side	Steam Engine.	Reader & Sons	Not. Cert. C24612	1-145 KW. Esab generator.

Is electric current used for essential services at sea? Yes. If so, state the minimum No. and capacity of generators required in order that the ship may operate at sea 7. 1-163 kW

Is an electric generator driven by Main Engine? No.

STEAM INSTALLATION. No. of donkey boilers burning oil fuel 2 w.p. 150 lbs/sq" Type S.E. Scotch boilers.

Position On a platform aft in the Engine Room.

Is a superheater fitted? --- Are these boilers also heated by exhaust gas? No. No. of donkey boilers heated by exhaust gas only? 1 w.p. 149 lbs/sq"

Type Spanner Position in funnel. Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil fired boilers? Only in conjunction with the oil fired boilers.

Port and No. of report on donkey boilers BHM No. 285 Is steam essential for operation of the ship at sea? No. Are any steam pipes over 3 ins. bore? Yes. If so, what is their material? Copper For oil fired boilers is the arrangement of pipes, valves, controls, etc., in accordance with the Rules? Yes. No. of oil burning pressure units 2. No. of steam condensers 1. No. of Evaporators 1.

STEERING GEAR. (State No. and Type of Steam Engines, Electric Motors, Hydraulic Pumps and other particulars) Hasties, electro-hydraulic

Have the Rule Requirements for fire extinguishing arrangements been complied with? Yes. Brief description of arrangements 6x9 lit. foam extinguishers in ER, 2 in donkey boiler room; 1x6 kg. CO₂; 2x45 lit. foam; 2 sand boxes; Steam under DB and ER floors, controlled from deck; One separate independent driven fire pump in forward pump room.

Has the spare gear required by the Rules been supplied? Yes. Has all the machinery been tried under full working conditions and found satisfactory? Yes. Date and duration of full-power sea trials of main engines 23.2.57. Does this machinery installation contain any features of a novel or experimental nature? (Give particulars) No.

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

GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This machinery has been built under Special Survey in accordance with the Rules and approved plans and has been securely fitted onboard under my inspection and to my satisfaction. The workmanship and material used are good. All important forgings and pumps intended for essential service have been tested in accordance with the Rule Requirements. El. welding of the Main Engine Bed Plate has been carried out to my satisfaction and the el. welded Main Engine cylinder frames have been made by Hammarqvist, Västerås under supervision of the Stockholm Surveyors.

On completion of full load trials in shop the welded bed plate and frames were carefully examined and found as far as could be seen free from defects. The machinery has been examined under full working power on a trial trip and found to work satisfactory. A notice board stating that the Main Engine is not to be run between 88 and 94 RPM has been fitted at the control station, and the tachometer has been marked accordingly.

This machinery is eligible, in my opinion, to be classed +LMC 2.57, 2 Donkey Boilers with a working pressure of 150 lbs/sq" each, and Tail Shaft fitted with CL.

Note:-

The Owners desire to adopt the CS-system.

Oluf Sjöström
 Engineer Surveyor to Lloyd's Register of Shipping.

PARTICULARS OF IDENTIFICATION MARKS (Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

PistonRODS LLOYD'S GOT. NOS. 715/16/19/20/21/22/17 and 4083/88 OS. 7.12.56.

Connecting rods LLOYD'S GOT. NOS. 634/35/37/38/39/40/41/42 OS. 7.12.56.

CRANKSHAFT ~~XXXXXXXXXX~~ LLOYD'S GOT. NO. 8598/6 GA. 16.8.56.

FLYWHEEL SHAFT ---

THRUSTSHAFT LLOYD'S GOT. NO. 8597 GA. 16.8.56.

GEARING ---

INTERMEDIATE SHAFTS LLOYD'S GOT. NOS. 1331 and 3567 OS. 25.1.57.

SCREW ~~XXXXXXXXXX~~ SHAFTS LLOYD'S GOT. NOS. 1337/38 NF. 7.9.56.

PROPELLERS LLOYD'S Rot. NO. 7280 AvH. 4.1.57.

OTHER IMPORTANT ITEMS No. 1337 is the spare propeller shaft:

Air Receivers:

LLOYD'S NOS. 19853/DN 1 and 2 BHM.
LLOYD'S TEST 605 lbs.
WP 368 lbs.
WL. 12.9.56.

Is the installation a duplicate of a previous case? Yes. If so, state name of vessel M/T "RAGNA GORTON", Uddevallavarvet Yard No.142 Gothenburg First Entry Report No. 22190.

Date of approval of plans for crankshaft 22.3.56. Straight shafting 22.3.56. Gearing --- Clutch ---

Separate oil fuel tanks --- Pumping arrangements 1/8 and 26/10-1956. Oil fuel arrangements 6.2.57.

Cargo oil pumping arrangements 1.8.56. Air receivers --- Donkey boilers ---

Dates of examination of principal parts:-

Fitting of stern tube 4.1.57. Fitting of propeller 15.1.57. Completion of sea connections 30.1.57. Alignment of crank shaft in main bearings 22.10.56.

Engine chocks & bolts 12.2.57. Alignment of gearing --- Alignment of straight shafting 1.2.57. Testing of pumping arrangements 27 & 28/2.57.

Oil fuel lines 26.2.57. Donkey boiler supports 18.1.57. Steering machinery 28.2.57. Windlass 28.2.57.

Date of Committee TUESDAY 14 MAY 1957

Decision + LMC (With T.V. End.)

ES }
 DAS } 2.57
 TSCH }

Special Survey Fee dur.constr. Kr. 4.310:-

dur.install. Kr. 2.400:-

Welding of bedplate Kr. 290:-

Expenses Kr. 363:-

Date when A/c rendered 19/3-1957.



Lloyd's Register Foundation