

Rpt. 9

Date of writing report 9/4-57

Received London

10 APR 1957

Port

Bergen

No. 4361.

Survey held at Bergen

No. of visits 69

First date 30/8-55

Last date 22/11-56

REPORT OF PERIODICAL SURVEYS & REPAIRS OF MACHINERY

No. in R.B. 80615 Name M.V. "TITANIAN"

Gross tons 8434. Date of build 1930-10

Owners A/R JULIAN.

Managers HILMAR REKSTEN

Port of Registry Bergen

Engines made 1930 By Swan, Hunter & Wigham Richardson Ltd. Newcastle Type Internal Combustion

No. of Main Engines 1 No. of Screws 1

Records of Survey & Special Notations as per Register Book

No. of Main Boilers 1 W.P. ✓

No. of ~~Donkey~~ Boilers 2 W.P. 150 LB/IN²

Surveyed Afloat or in Dry Dock Both

Nature of Survey L.M.C., screw shaft, Donkey Boilers 2 conversion

Was Damage Report issued? No Int. Cert.? Yes

Last Report (For Head Office only)

Hull	Machinery
100 A1	L.M.C. C.S. 5,51
carrying Petroleum in bulk	C.L. 9,54
9,54	D.B.S. 9,54
S.S. Ham. 7,50	st.p.t. 5,51.

The condition of any of the following items is to be described as "good" only when the part has been examined, found or placed in good condition, and is considered to be acceptable until the due date of the next Periodical Examination. Where it is considered that re-examination or repairs should be effected before the due date of the next Periodical Examination a distinguishing mark thus + should be inserted against the item and the circumstances and action recommended described fully under "defects and repairs". At part or complete Special Surveys those items which are not applicable to the ship should be cancelled with a black line; this need not be done when the machinery is on a continuous survey basis. When any part has been subjected to pressure test this should be stated. Engine parts when referred to by numbers should be counted from forward.

DOCKING Propeller Good Wear Down of Stern Bushes Negligible. In Oil Glands ✓ Sea Connections Good
 Fastenings Good Has Screwshaft been drawn? Yes Date of Examination 14/6-56 Has Shaft been changed? Yes
 Has Shaft now fitted been previously used? No Has Shaft now examined/fitted a continuous liner? Yes Approved oil gland? No

MAIN ENGINES (Recip. Steam or I.C.)

PORT

STARBOARD

1 Cyls., Covers, Pistons & Rods all good
 2 Valves & Gears all good
 3 Connecting Rods, Top Ends & Guides all good
 4 Crankpins & Bearings all good
 5 Journals & Bearings all good

MAIN ENGINE DRIVEN AIR COMPRESSORS PREVIOUSLY DISMANTLED.

6 Cyls., Covers, Pistons & Rods
 7 Connecting Rods & Top Ends
 8 Crankpins & Bearings
 9 Journals & Bearings
 10 Coolers & Safety Devices

MAIN ENGINE DRIVEN SCAVENGE PUMPS

11 Cyls., Covers, Pistons & Rods Good
 12 Connecting Rods & Top Ends Good
 13 Crankpins & Bearings Good
 14 Journals & Bearings Good
 15 Levers Good

SCAVENGE BLOWERS

SUPERCHARGERS

MAIN TURBINES

16 Casings, Rotors, Blading, Bearings & Thrusts

19 EXHAUST STEAM TURBINES (WITH RECP. ENGINES)

20 STEAM COMPRESSORS

21 CLUTCHES & HYDRAULIC COUPLINGS

22 REDUCTION GEARING

23 THRUST BLOCKS, SHAFTS & BEARINGS Good

24 INTERMEDIATE SHAFTS & BEARINGS Good

25 HOLDING DOWN BOLTS & CHOCKS Good

26 CONDENSERS (MAIN & AUX.) Good

27 STEAM DE-HEATERS

28 DE-SUPERHEATERS

29 STOP & MANOEUVRING VALVES Good

30 MAIN ENGINE DRIVEN PUMPS Good

31 CRANKCASE DOORS & EXPLOSION RELIEF DEVICES Good

Have Main Engines been tested working and manoeuvring? Yes.

OPINION OF MACHINERY AND RECOMMENDATIONS

The machinery of this vessel is in good condition and eligible in my opinion to remain as classed with fresh records of survey L.M.C., C.S. 11.56, screw shaft (C.L.) seen 6.56 (N), D.B.S. 11.56 and st.p.t. 6.56, subject to distance piece between crankcase and cylinder block of steam engine driving foremost auxiliary compressor being renewed before the end of November 1957 and evaporator safety valve being adjusted under steam before April 1957

Date of Committee

JUESDAY 7 MAY 1957

Decision

CS 11.56, subject DBS 11.56.
SPS 6.56.

For self & K. Olsen.

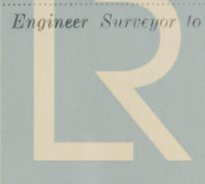
S. A. Bide

Engineer Surveyor to Lloyd's Register of Shipping

30m. 6.55. T. (MADE AND PRINTED IN ENGLAND.)

TSN. 6.56.

CERTIFICATE WRITTEN.



Lloyd's Register Foundation

003131-003137-0085 74

If certificate is required state where to be sent. This office. Beys

32 Essential Independent Pumps (Identify by position) Bilge pump, Stbd. fore end main eng. Bilge & G.S. pumps, Stbd. fore end & Stbd. aft end Ballast pump, Stbd. fore end main eng. Ballast & G.S. pump, Stbd. fore end, cooling water pumps, port side and inboard & outboard oil fuel transfer pump, p.s. fore end outboard & bilge & G.S. pump, fwd. pump room all good.

33 Bilge, Ballast & Oil Fuel Suction Lines, Fittings & Controls. Good

34 Have the remaining Piping Arrangements & Fittings in the machinery space been examined as considered necessary? Yes Good

35 Fresh Water Coolers Good 36 Lub. Oil Coolers Good 37 Heaters (state service) Feed water boiler burning units.

38 Independent Air Compressors, Coolers & Safety Devices Good 39 Air Receivers & Safety devices—Main Good 40 Auxiliary. None.

41 Oil Fuel Tanks (Not forming part of hull structure) Good 42 Evaporators Good 43 Have Evaporator Safety Valves been tested under steam? No. 44 Steering Machinery Good 45 Windlass Good 46 Fire Extinguishing Arrangements Good

AUXILIARY ENGINES (Identify by position) Steam engines port side forward driving inboard and outboard dynamos good.

PROPULSION	PORT	STARBOARD	ELECTRICAL EQUIPMENT	AUXILIARY EQUIPMENT
a Generators			i Generators & Governors.	Good
b Exciters			ii Motors	Good
c Air Coolers			iii Switchboards & Fittings	Good
d Motors			iv Circuit Breakers	Good
e Air Coolers			v Cables	Good
f Control Gear, Cables, etc.			vi Insulation Resistance	Good
g Insulation Resistance			vii Steering Gear Generators and Motors	Good
h Insulating Oil Test			viii Navigation Light Indicators	Good
i Overspeed Governors				
j Magnetic Couplings				
k Air Gap				

BOILERS OPENED UP & EXAMINED (Identify by position and state latest date of internal examination of each boiler) MAIN, DONKEY & PRESS. Both 24/10-56 Good

Superheaters Good
Safety Valves Good
Mountings, Doors & Fastenings 150 LB/IN²
Safety Valves Adjusted to Sat. ✓
Spt. Good
Boiler Securing Arrangements ✓
Main Economisers Exhaust Gas Heated Economisers ✓
Steam Heated Steam Generators Steam Generator Safety Valves Adjusted to ✓
Were Oil Burning System & Remote Controls examined working in accordance with Rules? Yes Good Forced Circulating Pumps Funnel Good
Have Saturated Steam Pipes in cylindrical boiler smoke boxes been examined as required by Rules? ✓

EXAMINATION & TESTING OF STEAM PIPES (State material) Main Copper Good. Auxiliary (over 3 in. bore) Copper Good. No.
Were Copper Pipes annealed? Yes Were Saturated Pipes in cylindrical boiler smoke boxes been tested? No.

PARTICULARS OF DEFECTS & REPAIRS, ETC. (Damage repairs should be detailed separate from wear and tear repairs; state what action has been taken regarding items which are subjects of class)

Repairs due to wear and tear:
Main Engine: All gas pumps for solid injection overhauled by the makers Messrs Nylands Verksted, Oslo.
Main bearings Nos 2, 3, 5, 6 & 7 reinstalled bottom half.
Piston crowns Nos 1, 5 & 6 renewed (Spare ones fitted) All three tested by this Society's Surveyors.
Further general overhaul repairs to oil pumps, manoeuvring gear, turning gear, valves & valve gears, telescopic pipes etc. carried out.
Main engine cooling water system cleaned out.
Main engine holding down bolts hardened up and 2 broken ones renewed.
Screwshaft and intermediate shaft with coupling bolts renewed due to fracture between 2 bolt holes of intermediate shaft coupling and to coupling bolt holes of both shafts being excessively reamed out.
Spare screwshaft and spare intermediate shaft onboard fitted.
The screwshaft now fitted found marked: - 0/176/52 LLOYD'S 25589 D.B. 644. 12-1-53.
A new spare screwshaft placed onboard. Same found

Survey fees Kw 1385.-
Conversion & Repairs " 2000.-
Electrical Installation " 800.-

Damage fee ...
Expenses... " 150.-

Date when A/c rendered 19/12-56.

Rpt. 9a

Port of BERGEN

Continuation of Report No. 4361 dated 9th April 1957. on the

M.S. "TITANIAN"

marked: - 28557/56 LLOYD'S 1th. R No 269 G.H. 1-8-56. Seith Certificate attached. Markings on spare intermediate shaft now fitted indecipherable.

Intermediate shaft bearings reinstalled

Stembrish renewed all round. Inner gun metal stembrish renewed

All go-ahead thrust pads renewed.

The whole shafting re-aligned.

A small crack in way of tip of one blade of manganese bronze propeller welded.

Both main engine driven lub oil pumps and independent steam driven forced

lub. oil pump starboard fore end overhauled. Both main engine driven ones fitted

new plungers.

Auxiliaries.

Piston cooling water pump (Centrifugal): Impeller shaft and crankshaft for steam engine driving same renewed.

Jacket cooling water pumps: - Water end cylinder renewed.

Both auxiliary air compressors including coolers thoroughly overhauled. Coolers hydraulically tested. Steam engines driving same overhauled.

Steam engine driving port foremost auxiliary air compressor: - Distance piece between crankcase and cylinder block found fractured and has now been temporary repaired by the fitting of straps secured by studs. Temporary repairs found efficient.

Steam driven ballast pump starboard fore end: - Vertical 2 cylinders Thos. Lamont & Co. Ltd overhauled and fitted new steam pistons and rods & slide valves. Water end piston rods skimmed and neck and gland bushes renewed.

Steam driven oil cargo pump transferred from main pump room and fitted as ballast pump starboard side abreast fore end of main engine on a new seating. Pumps 16"x14"x18" of Hayward Tyler & Co. Ltd. make, has been thoroughly overhauled.

Steam driven bilge & General Service pump: Starboard outboard abreast fore end of main engine, fitted new water end pistons and thoroughly overhauled.

Sanitary pump Starboard aft end (forward of evaporator) thoroughly overhauled.

Auxiliary Condenser: Starboard fore end. Fore end cover renewed.

Feed water heater: All tubes and one end cover renewed.

Port forward outboard feed pump: Piston rod skimmed in lathe and piston rings renewed and pump thoroughly overhauled.

Port forward inboard feed pump: Piston rod and slide valve renewed and pump thoroughly overhauled.

Steam engine driving port outboard dynamo (12kw) Piston rod skimmed and piston rings and slide valve renewed.

Steam engine driving port inboard dynamo (20kw) Crankshaft skimmed in lathe in way of shaft journals and main bearings reinstalled.

Fuel oil transfer pumps, port side fore end thoroughly overhauled.

Oil burning plant: - Both pumps, hand pump and heaters overhauled. Heaters hydraulically tested.

Fuel and lub oil separators overhauled.

Evaporator Safety valves renewed.

Port Donkey Boilers: 6 staybolts renewed.

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Starboard Donkey Boiler: One exhaust gas tube renewed.

Windlass steam and exhaust copper pipes renewed. Tested by hydraulic pressure. Steam driven oil fuel transfer pump and duplex bilge and ballast pump in forward pumproom thoroughly overhauled.

Further various other general overhaul repairs carried out.

CONVERSION:-

Ship has now been converted to a dry cargo ship and all cargo tank piping and fittings have been removed.

The bilge and ballast pumping arrangements have been modified and partly renewed in accordance with approved plans, for bilge pumping Plan ML 32/57 dated London 19/4-56 and for ballast pumping Plan ML 32/61 A dated London 8/8-56.

The pumping arrangement in the fore part of ship has been modified in accordance with approved plan ML 25/49 dated London 19/4-56.

The piping through deep tanks and crossbunker has been tested in accordance with the Rules.

Wing suction have been fitted in D.B. tanks.

The following pumps are used for bilge service:-

New bilge pump of Bucka make 190mm x 200mm x 175mm, steam driven at starboard side abreast fore end of main engine Capacity 62 T/hr.

Existing bilge & General service pump Starboard side abreast fore end main engine. Hayward Tyler steam driven Capacity 100 T/hr.

Existing bilge & General service pump Starboard side abreast aft end main engine Lamont make. Steam driven. Capacity 47 T/hr.

Ballast pumps:- A steam driven cargo oil pump, Hayward, Tyler make 16" x 14" x 18" of 350 T/hr. capacity has been transferred from main pump room and fitted on new seating Starboard side abreast fore end main engine.

Existing ballast pump Starboard side fore end, Lamont make 9" x 9" x 18" and capacity 150 T/hr. also connected to main bilge line.

A new 10" sea inlet valve chest for ballast pump has been fitted on fabricated steel water box welded to shipside in accordance with approved plan ML 34/67 dated London 12/6-56.

Fuel oil pump port side fore end used for oily bilge port and starboard side engine room and for cofferdam in Double bottom aft.

Direct bilge in engine room as before.

Main engine driven cooling water pumps and bilge pump have been dismantled.

Independently driven cooling water pumps fitted as follows:-

Tanked cooling water pump Port side outboard fore end steam driven plungers pump. Capacity 180 T/hr.

Piston cooling water pump Port side inboard fore end steam driven

centrifugal pump. Independent forced lub oil pump as before fore end port side sounding and air pipes in way of holds and D.B. tanks fitted in accordance with Rule requirements and according to approved plan

ML 32/64 dated London 7/6-56. Hold sounding pipes have been led to the bilge wells.

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Striking plates fitted below sounding pipes.

Fire extinguishing:- A fire pump has been fitted in forward pumproom driven by a "PETER" oil engine.

A new sea inlet valve chest for fire pump has been fitted on fabricated steel water box welded to shipside.

Steam smothering fitted to holds

4 off portable froth and 2 off 45 litres transportable froth extinguishers fitted in engine room as well as 2 water hydrants port and starboard 3 portable froth extinguishers as well as 1 water hydrant fitted in Donkey boiler space. Steam smothering below Donkey boilers as before.

The electrical installation has been modified and main cables to the section boxes fore and aft and in way of accommodation and to Navigation lights renewed of approved type in accordance with approved plans noted London 13/11-56.

Copy of Interim Certificate attached - and one copy has been sent to the Oslo Surveyors
SAC.



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