

Report No. 9
 Date of writing report 15-3-57
 Survey held at Kasado, Japan

Received London 25 APR 1957
 No. of visits 10

Port Shimonoseki No. 665
 First date 22-1-57 Last date 22nd Feb., 1957.

REPORT OF PERIODICAL SURVEYS & REPAIRS OF MACHINERY

No. in R.B. 68374 S.S. Name "LUCAS TRADER" Gross tons 5343 Date of build 6-1914
 Owners Lucas S.S. Co. Ltd. Managers Wheelock, Marden Hong Kong & Co. Ltd. Port of Registry Hong Kong
 Made at Sunderland By Richardsons, Westgarth & Co. Ltd. Type T 30y

Records of Survey & Special Notations as per Register Book

Hull			Machinery	
BS*	SS	11/51	MBS*	
SS	Pir	11/51	Eng.	8/51
Dkg		1/56	Blrs	1/56
			TS (CL)	2/55
			sps	11/54

No. of Main Boilers 3 W.P. 180 lb
 No. of Aux./Donkey Boilers - W.P. -
 Surveyed Afloat or in Dry Dock Both
 Nature of Survey Blrs, TSCL, Eng & Oil Conversion
 Damage Report issued? No Int. Cert.? Yes
 Report (For Head Office only)

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 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.

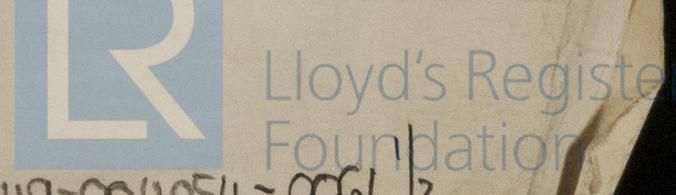
PROPELLERS Good Wear Down of Stern Bushes 1.8 mm Oil Channels Sea Connections Good
 FASTENINGS Good Has Screwshaft/Tubeshaft been drawn? Yes Date of Examination 2-2-57 Has Shaft been changed? Yes
 SHAFTS Has Shaft now fitted been previously used? Yes Has Shaft now examined/fitted a continuous liner? Yes Approved mixture
 MAIN ENGINES (Recip. Steam) HP, MP, LP. Good
 Cyls., Covers, Pistons & Rods HP, MP, LP. Good
 Valves & Gears HP, MP, LP. Good
 Connecting Rods, Top Ends & Guides HP, MP, LP. Good
 Crankpins & Bearings HP, MP, LP. Good
 Journals & Bearings Good
 MAIN ENGINE DRIVEN PUMPS
 Cyls., Covers, Pistons & Rods
 Connecting Rods & Top Ends
 Crankpins & Bearings
 Journals & Bearings
 Valves
 SCAVENGE BLOWERS
 SUPERCHARGERS
 MAIN ENGINES
 Casings, Rotors, Blading, Bearings & Thrusts
 EXHAUST STEAM TURBINES (WITH REFRIGERATORS)
 STEAM COMPRESSORS
 CYCLES & HYDRAULIC COUPLINGS
 REDUCTION GEARBOX
 THRUST BLOCKS, SHAFTS & BEARINGS Good
 INTERMEDIATE SHAFTS & BEARINGS Good
 HOLDING DOWN BOLTS & CHOCKS Good
 CONDENSERS (MAIN & AUX.) Main, Aux. Test Good
 STEAM REHEATERS
 DESUPERHEATERS Good
 STOP & MANOEUVRING VALVES Good
 MAIN ENGINE DRIVEN PUMPS Air pump, Circulating pump, Bilge & Feed pumps Good
 CRANKCASE PUMPS & EXHAUSTION PUMP DEVICES Have Main Engines been tested working and manoeuvring? Yes

OPINION OF MACHINERY AND RECOMMENDATIONS.
 The machinery of this vessel, so far as now seen is in good condition and eligible in our opinion to remain as classed with the record of Blrs 2,57 TS (CL) 2,57 and fitted for O.F. 2,57 flash point above 150°F be made now and Eng. 2,57 be made in the Register Book in the case of this vessel, when the Machinery Survey has been completed.

Date of Committee Decision See Swt 675

Noted for Header

Peter Manson Engineer Surveyor to Lloyd's Register of Shipping



004049-004054-006/12

If certificate is required state where to be sent

Essential Independent Pumps (Identify by position) E.R. port:-one(1) General service pump, Two(2) Feed pumps,
One(1) Ballast pump. B.R. port fwd:- Two(2) O.F. Burning pumps, one(1) O.F. Transfer pump

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

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

Heaters (state service) Feed Water Heater (tested, Good)
Oil Fuel Heater (New, not tested)

Oil Fuel Tanks (Not forming part of hull structure) New tanks in Engine Room (p & s) tested, Good

Evaporators dismantled.

Steering Machinery Good Windlass Good Fire Extinguishing Arrangements Good

AUXILIARY ENGINES (Identify by position)

30 KW steam generator engine (E.R. starb'd aft Lower platform) Good
10 KW steam generator engine (E.R. port aft 2nd deck) +

ELECTRICAL EQUIPMENT

DESCRIPTION	WORK	STATUS	AUXILIARY EQUIPMENT
a Generators			Generators & Governors 30 KW Good 10 KW not tested.
b Exciters			
c Air Coolers			
d Motors			
e Air Coolers			
f Control Gear, Cables, etc.			Switchboards & Fittings For 30 KW Good
g Insulation Resistance			
h Insulating Oil Test			Cables Good
i Overspeed Governors			Insulation Resistance Good
j Magnetic Couplings			
k Air Gap			Navigation Light Indicators Good

BOILERS OPENED UP & EXAMINED (Identify by position and state latest date of internal examination of each boiler)

port
MAIN centre 26-1-57 Good
starb'd

Safety Valves Good
Mountings, Doors & Fastenings Good
Safety Valves Adjusted to Sat. 180 lb
Boiler Securing Arrangements Good

Were Oil Burning System & Remote Controls examined working in accordance with Rules? Yes, good
Funnel Good

EXAMINATION & TESTING OF STEAM PIPES (State material) Not examined*tested.

Main Auxiliary (over 3 in. bore)
Were Copper Pipes annealed? Have Saturated Pipes in cylindrical boiler smoke boxes been tested?

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

Wear & Tear Repairs:

Main Engine

HP piston rod skimmed, neck bush and metallic packing renewed.
HP astern guide bars skimmed and adjusted.
HP slide valve rod nut renewed.
HP & MP cylinder escape valve springs renewed.

Main engine driven bilge pump plunger top steel end screw worn & slack, now renewed
Screw Shaft & Propeller

Screw shaft drawn in, examined and found somewhat corroded at base of cone. Now replaced with ships spare previously used. The above spare shaft cone skimmed to fit new propeller and subsequently propeller found to be a good fit. Screw shaft and intermediate shaft coupling bolt holes rereamered and coupling bolts renewed.

No marks found on the shaft.

Wear down of stern bushes found excessive. Now bottom half of lignum vitae rewooded.

Survey fees M.B.S. 254-0-0 (Cont'd.)
B.S. 30-0-0
T.S.(C.L) 8-0-0
O.F. Conversion 30-0-0
Part Elect. 20-0-0
Damage fee
Expenses... 17-10-0

Date when A/c rendered APR 19 1957

Shimonoseki

Continuation of Report No. 665

dated

on the

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S.S. "LUCAS TRADER"

Existing cast iron propeller badly corroded and fractured blades at tip and now replaced with new propeller. Particulars are as follows:-

Four bladed Manganese Bronze Solid Propeller

Diameter 17'-6"

Pitch 17'-0"

Area 97 sq.ft.

Mark LLOYD'S Smk

NO. 1253

K.O. E

21-11-56

Thrust block holding down bolts found slack, tightened.

Intermediate shaft bearings worn, remetalled. (Nos. 4 & 5)

ps & Auxiliaries

Two (2) Feed pumps: Steam end piston rods skimmed.

General service pump: Water end rebored and bucket rod skimmed.

30 KW steam generator engine: Piston rod, slide valve rod renewed. Governor valve and spindle renewed.

10 KW steam generator engine: Lub. oil gear pump gears and driving gear wheel found badly worn. Recommended the pump to be completely repaired.

The engine & generator to be examined and tested under full power working condition. The Chief Engineer stated that the repair would be completed and tested when the vessel return to Japan. (due end of March 1957.)

Steering engine: Starboard piston rod renewed.

Windless: Crank shaft badly worn. Crank shaft, two crank pin bearings and eccentric sheaves renewed.

Main Condenser: 27 tubes renewed. Several cracks found between tube holes in the aft tube plate in way of division plate and leaking. Now done holes in way steel screw plugged and screw stop studs fitted on cracks subsequently tested and found tight.

Aux. Condenser: Seven tubes renewed, tested, found tight.

Evaporator At the request of the Owners evaporator dismantled.

Boilers

Port boiler: One port combustion top girder dog stay fractured, renewed.

Front end plate inside slight star cracks in way of upper longitudinal stay of bottom manhole doors found. Cracks veed out and welded.

Centre boiler: Eight (8) small stays fractured or badly worn, renewed.

Starb'd boiler: Two (2) small stays and one internal feed pipe renewed.

Star cracks similar to port boiler found, now dealt with as in port boiler.

Exhaust steam heaters in smoke boxes of all boilers were removed for scrap.

Fuel Conversion

Vessel converted this time to oil fuel burning system. (NATURAL DRAUGHT)

Complete set of oil burning appliances, which was manufactured by Messrs. "TODD OIL BURNERS LTD, LONDON" and tested by the Societys Surveyors and marks have been stamped, installed in good order.

Two oil burning units consisting of two pressure pumps, two heaters, suction and delivery filters. These pumps provided with effective escape valves which are in close circuit. Escape valves fitted on the oil side of the heaters properly adjusted.

S.S. "LUCAS TRADER"

Piping newly fitted and tested as per Rules and approve plans.

One oil transfer pump with relief valve with close circuit now fitted.

A starting-up oil fuel unit, including hand pump and aux. heater fitted.

Marks found:

Oil Heater	LLOYD'S TEST	5.9.56	RMC	
Oil Burning Pumps	293262 LLOYD'S TESTED	RMC	500 lbs 25.4.56 (NO. i	(oil & steam cyl.)
Size	3 x 4½ x 6			
Glasgow	293247 LLOYD'S TESTED	RMC	500 lbs 25.4.56 (NO.	(oil & steam cyl.)
Oil Transfer Pump	298063 LLOYD'S TESTED	RMC	200 lbs (oil cyl.)	
			500 lbs (steam cyl.	space

Emergency fire Pump: Separate pump room has been built under bridge deck/in way aft entrance port side, and oil engine driven volute pump installed, tested and found to be satisfactory.

A 2½" bore sea suction valve (tested) with deck control newly fitted, and necessary foot valve and filter fitted in the suction line and delivery pipe connected to water service fire main.

Particulars are as follows.

Manufacturers:

Engine	Russell Newbery & Co. Ltd., Dagenham, Essex, England
Pump	Hamworthy Eng. Ltd., Pool, England, NO.15388-13
	LLOYD'S TEST AFG Sou 7.9.56

Two oil fuel settling tanks of 22 tons capacity each fitted in engine room side bunkers (p & s) and suitably stayed. Steam heating coils now fitted in both settling tanks and Nos. 1, 2 and 5 D.B. oil fuel tanks and tested as per Rules and found tight.

Provision made for pumping, sounding and air ventilating of all oil fuel tanks. Funnel damper removed.

Steam smothering installations newly fitted in boiler room and oil fuel settling tank spaces and tested, found satisfactory. Hydrants 4 hoses found good. Sand and other fire extinguishers equipped as per Rules.

Deck controls provided for O.F. settling tank valves, O.F. burning pumps, oil transfer pump and steam smothering, examined and tested and found good.

On completion oil fuel burning system examined under working condition and found satisfactory.

Plans as fitted of oil fuel and steam piping approved herewith.

Electrical Equipment

Necessary junction box and wiring for Emergency fire pump room fitted. Defective wiring behind switch board made good and fuses renewed.

Interim Cert. (No. C-5379) issued, copy attached.



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