

17 MAY 1965

Received London

Rpt. 4b/4f REPORT ON INSTALLATION OF INTERNAL COMBUSTION MACHINERY (Inst) (Sheet 1)

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

NOTE.—The particulars in this report are to 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 items are marked with an asterisk* the particulars need not be repeated here if they have already been given on the relevant Rpt. 4b (Cons) or 4f (Cons). Wording not applicable to be cancelled.

Ship's Name " R.I. SORONG " Port SPLIT

Processing Number: LR 641864 Date of completing rpt. 21.4.1965 Rpt. No. 2589

Gross tons 4156 Place of survey, if different from above Trogir

No. of visits: In shops 15 First date 15.5.64. Last date 2.2.65

On ship 28 First date 10.7.64. Last date 31.3.65.

Owners Government of the Republic of Indonesia Port of registry

Ship built by Brodogr. "J.L.MOSOR" - Trogir Yard No. 137. When 64/65 4

Main engines made by Shipyard "ULJANIK" - Pula Engine No. 071 When 64 3

Gearing made by Gear No. - When -

Aux./diesel Oil fired: Tvornica Parnih Kotlova 5162 When 64

boilers made by Exhaust Gas: " " Boiler No. 5154 When 64

Machinery installed by Brodogradilište "J.L.MOSOR"-Trogir When 64/65

Particulars of service of ship if limited for classification -

Particulars of vegetable oil or other special cargo notation, if required -

If ship is to be classed for navigation in ice, state whether class 1, 2 or 3 -

Is ship an oil tanker? Yes Is refrigerating machinery fitted? Yes

If so, is it for cargo purposes? Yes Type of refrigerant "FREON 12"

Is the refrigerating machinery space isolated from the propelling machinery space? Yes

Is the refrigerated cargo installation to be classed? Yes

No. of main engines One Brief description of propulsion system Diesel engine direct driven

No. of propellers One system driven

Fee £162-10-0 & Din. 341.250.- Expenses see Rpt.1

MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE

To be reported on Rpt. 4b (Cons) See Rka Rpt. RIJEKA Port Rpt. No. 2055

MAIN GAS TURBINES No. 2055

To be reported on Rpt. 4f (Cons) - Port - Rpt. No. -

ELECTRIC PROPULSION: (Internal combustion reciprocating engines or gas turbines)

Electrical particulars to be reported on Rpt. 4d Port - Rpt. No. -

REDUCTION GEARING: (Internal combustion reciprocating engines or gas turbines)

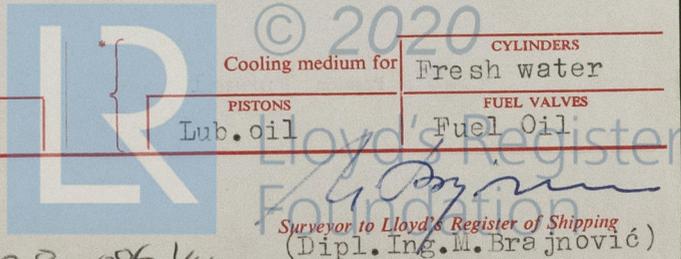
To be reported on Rpt. 4e Port - Rpt. No. -

*Are flame guards or traps fitted to crankcase relief devices?	Yes	No. of lub. oil coolers	MAIN Two	AUX. -
*Is a torsional vibration damper or detuner fitted to the shafting?	No	Is engine fitted directly on tank top, or on a built-up seating?	built up seating	
*Where positioned?	No	*Can engine/turbine be reversed?	Yes	
		*If not, how is reversing effected?	-	

*Type Burmeister & Wain, 550-VT2BF 110

Is the engine equipped to operate on heavy fuel?	No	Cooling medium for		CYLINDERS
		MAIN Two	AUX. -	Fresh water
No. of fresh water coolers	Two	PISTONS		FUEL VALVES
		MAIN Two	AUX. -	Lub. oil

612124-07128-0086 1/4



Surveyor to Lloyd's Register of Shipping (Dipl. Ing. M. Brajnović)

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

None

If main engine can be used for purposes other than propulsion when declutched, state what purpose also at what maximum B.H.P. & R.P.M.

None

AIR COMPRESSORS AND RECEIVERS

State No. of independently driven air compressors, also capacity of each and whether a separator or filter is provided between each compressor and the air receivers, type of prime mover, position in ship, Port and No. of cert.

One air compressor, 120 m³/h, Yes filter, diesel, platform p.s.fwd.
 Hamburg Cert.No. 63/2414 ✓ ^{ER}

One air compressor, 47.5 m³/h, Yes filter; El. motor E.& p.s.fwd.
 Hamburg Cert.No. 63/1495 ✓ ^{ER}

One compressor, 0,53 m³/h, Yes filter, hand, platform p.s.fwd.
 Rijeka Cert. No. 12584. ^{ER}

State No. of starting air receivers, both main and auxiliary, capacity of each, position in ship, Port and No. of cert.

Two main air receivers, cap. each 3 m³; platform p.s.fwd, and aft.
 Rijeka Cert. No. 15131 ✓ ^{ER} 1-2

One aux.; cap. 250 lit.; E.R. p.s. Hannover Cert.No. 63/53 ✓

One aux.; cap. 50 lit.; platform p.s., Rijeka Cert.No. 16206 ✓ ^{ER}

How are air receivers first charged? By hand
 compressor

Are the safety devices in accordance with the Rules? Yes

Are bursting discs or flame arresters fitted at the starting air valves on each cylinder? Bursting disc

Maximum working pressure of starting air system 25 kg/cm²

Has the starting of the main engines been tested and found satisfactory? Yes-satisfactory

STEAM INSTALLATION

No. of aux. ~~monkey~~ boiler(s) (see Key to R.B.) burning oil fuel

One

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? Directly

Working pressure 12 kg/cm²

Type Cylindrical

multitubular boiler (Scotch)

Port and rpt. or cert. Nos. for aux. ~~monkey~~ boilers

Oil fired, Rijeka Rpt. No. 2238

Ex.gas boiler, Rijeka Rpt.No.2251

Position Boiler room (platform aft)

Is a superheater fitted?

Is steam essential for the operation of the ship at sea? Yes

Are these boilers also heated by exhaust gas? No

If so, are any steam pipes over 3 ins. bore? Yes

No. of aux. ~~monkey~~ boiler(s) (see Key to R.B.) heated by exhaust gas only

One

What is their material? S.M.Steel

Working pressure 6 kg/cm²

For oil-fired boilers, is the arrangement of pipes, valves, controls, &c., in accordance with Rules? Yes

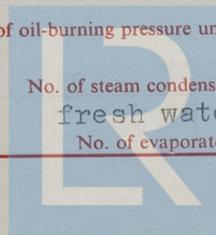
Type Vertical Boiler

No. of oil-burning pressure units Two

Position Funnel

No. of steam condensers fresh water One

No. of evaporator One



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Date of approval of torsional vibration characteristics of the propelling machinery system with:—

Particulars of barred speed range(s) if imposed, with:—

(a) Working propeller **19.2.1963**

(a) Working propeller **92-109 RPM**

(b) Spare propeller

(b) Spare propeller

30/7/64
568c.

80-97 RPM.

STRAIGHT SHAFTING

Max. BHP/SEP approved for each line of shafting
THRUST SHAFT. Separate or integral with crank, wheel or electric motor shaft?

3500
Integral with flywheel shaft

Corresponding RPM of propeller

170

MN

700

Thickness of liner between bearings
How is the after end of the liner made watertight in the propeller boss?

15 mm
Rubber ring

Diameter adjacent to collar

400 mm

Material of screw/~~cut~~ shaft

S.M. Steel

Material

S.M. Steel

Minimum approved tensile strength

44 kg/cm²

Minimum approved tensile strength

44 kg/cm²

Is an oil gland fitted?

No

INTERMEDIATE SHAFT

Diameter

280 mm

What type?

Material

S.M. Steel

If an approved type, state name

Minimum approved tensile strength

44 kg/cm²

Length of bearing next to and supporting propeller

1000 mm
1260 mm

SCREWSHAFT. Dia. of cone at large end

318 mm

Material of bearing

Lignum vitae

Is screwshaft fitted with a continuous liner?

Yes

Material of sterntube

Steel

TUBE SHAFT (if separate)

Diameter

-

Is tube shaft fitted with a continuous liner in way of stern tube?

fwd 20; Aft 20 mm

Is sterntube fabricated? In multiple screw ships, is the liner between sterntube & "A" bracket continuous? If not, is the exposed length of shafting between liners readily visible in drydock?

Made by Shipyard-Trogir

PROPELLER

If of special design, state type

No

State method of control

-

Is it of reversible pitch type?

-

If so, is it of approved design?

-

PROPELLER	BLADE MATERIAL	TENSILE STRENGTH	BUILT OR SOLID	LEFT HAND (LH) OF RIGHT HAND (RH)	NO. OF BLADES	DIAMETER	PITCH	TOTAL DEVELOPED SURFACE
Working	Manganese bronze	34.6	Solid	R.H.	4	3623 mm	mm 2954.5	m ² 4.9974
Spare	Cast Iron	--	"	R.H.	4	3623 mm	2777	5.0

FOR ICE STRENGTHENING ONLY

PROPELLER	DESIGN MOMENT OF INERTIA OF PROPELLER (DRY)	CLASS 1, 2 OR 3	THICKNESS OF BLADES			LENGTH OF BLADE SECTION AT 25% RADIUS	RAKE OF BLADES
			AT TOP OF ROOT FILLET	AT 25% RADIUS	AT TIP		
Working							
Spare							

OIL FUEL TANKS

One service tank platform p.s.fwd.

No. and position of oil fuel settling or service tanks not forming part of ship structure

LUBRICATION

No. of lub. oil pumps and how driven

Two, el. driven

Is an alarm device fitted to indicate failure or reduction of supply from the pumps?

Yes Alarm device

Can normal supply be maintained with any one pump out of action?

Yes with 1 p.

No. of oil coolers

Two

Is an emergency supply automatically available as per Rule? (turbines only)

-

No. of duplex oil strainers

One

Are the strainers of magnetic type?

No, mech. type

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INDEPENDENT PUMPS	SERVICE FOR WHICH EACH PUMP IS CONNECTED TO BE MARKED THUS ×														
	SUCTION							DELIVERY							
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel Tanks	Condenser Extraction	Sea	Feed Tanks	Fresh Wat. Lub. Oil	Boiler Feed	Main Condenser	Oil Fuel Burners	Oil Fuel Tanks	Fire Main	Overboard	Fresh Wat.
1. Bilge p. E.R. fwd. El. driven 75 m ³ /h	X	X												X	
1. G.S.P.E.R. c.fwd. El. driven	X					X	X						X	X	X
1. Sea w.p. E.R. c.fwd. El. driven		X				X								X	
1. Sea W.P. for condenser ER. p.s. aft El. driven		X				X								X	
1. Feed W.p. Boil. room p.s. platf. steam driven							X		X						
1. Feew w.p. B. Room plat. centre fwd. El. driven							X		X						
1. Spare feed w.p. B. Room plat. c.fwd. El. driven							X		X						
2. Lubr. oil pumps E.R. stbd. s. aft El. driven															M.E. X
2. Booster f. oil p. E.R. p.s. aft El. driven				X											M.E. X
1. Booster pump attached to M.E. fwd.				X											M.E. X
2. pump for cool. oil fuel val. ER p.s. afr El. dr.				X							X				
2. Cargo ps. Main P. Room p&s. aft; steam driven			Cr. Tnk X			X	Fl. oil X							X	Cr. Tnk X
1. Bilge p. Main P. room stbd. s.; steam driven		X												X	
1. Bilge p. fwd. P. room stbd. s.; steam driven		X	X	X							Fore Pk X			X	Tanks X

BILGE SUCTIONS
 No. and size in each hold, deep tank, cofferdam and pump room
Cofferdam: One 3" centre;
Fwd. p. room: One 3" centre aft ✓
Main P. room: Two 3" each fwd & aft

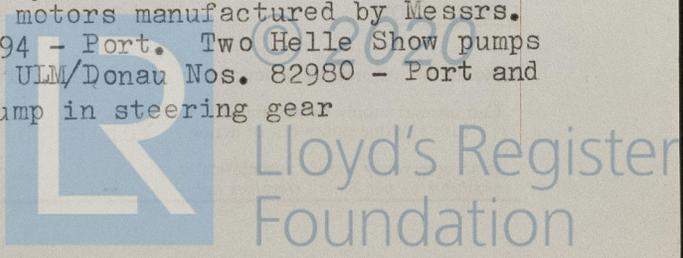
Sizes and positions of direct suction in machinery spaces
 One (114/107) 4" fwd. centre;
 One 5" stbd. s. centre (125mm)

No. and size connected to main bilge line in:—
 Main engine room . . .
 Aux. engine room . . .
 Boiler room Platform three 2" to tunnel
 Tunnel One 3" aft centre ✓

Sizes and positions of emergency suction in machinery spaces
 One (159/150) 6" p.s. cent. (P. for condenser)
 One (133/125) 5" centre fwd. (Sea w. cool. p.)
 Are all suction of non-return type? Yes

Has the bilge or ballast system means for separating oily water on the overboard discharge side? Oily water separator.
 Do the pumping arrangements comply with the Rules, including special requirements for oil tankers, ships classed for carrying cargo oil, or classed for navigation in ice Class 1, 2 or 3? (Strike out words not applicable) Yes
 If to be classed for navigation in ice, state means provided for clearing ice from ship's side valves

STEERING GEAR. (State type, also No. of ~~steam engines~~ electric motors, hydraulic pumps and other particulars, including particulars of the alternative means of steering) One electric driven Hydraulic two cylinders steering gear, type RH 2K - 290. - A.C. electric motors manufactured by Messrs. "RADE KONCAR" Nos. 43395 - stbd. & 433094 - Port. Two Helle Show pumps manufactured by Messrs. Hydromatic GmbH ULM/Donau Nos. 82980 - Port and 82980/A Stbd. Alternative means hand pump in steering gear compartment.



Ship's Name "R.I. SORONG"

Port SPLIT

Rpt. No. 2589

STEAM AND OIL ENGINE AUXILIARIES

REF	POSITION OF EACH	TYPE	MADE BY
a	Diesel - E.R. stbd. s.	A8M 528	Klößner-Humb.-Deutz Köln-Deutz AG.
b	Diesel E.R. Port s.	A8M 528	- " -
c	Diesel E.R. Platform p.s.	F6M 716	- " -
d	Diesel Fw.Pump room stbd.s.	F21 812	- " -
e			
f			
g			
h			

REF	PORT & No. OF REPORT OR CERTIFICATE	DRIVEN MACHINERY (for electric generators state kw, volts & amps)
a	Köln Rpt.No. 840 ✓	Generator 240 Kw.
b	Köln Rpt.No. 841 ✓	Generator 240 Kw
c	Hamburg Cert.No.63/2414 ✓	Generator 80 Kw; Compressor 120 m3/h
d	Copenhagen Cert.No.---	Centrif.pump 26 m3/h
e		
f		
g		
h		

If electric current is used for essential services at sea, state the minimum No. and capacity of generators required

(1) So that the ship may operate at sea

One generator 240 Kw

(2) For refrigerated cargo purposes

One generator 240 Kw

Has the spare gear required by the Rules been supplied?

Yes

Has all the machinery been tried under full working conditions & found satisfactory?

Yes

Date & duration of full-power sea trials of main engines

16.3.1965

Has the manœuvring of the main engines been tried and found satisfactory?

Yes

DECLARATION TO BE SIGNED BY INSTALLING ENGINEERS

To the best of our knowledge this machinery has been installed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of main and auxiliary machinery and pressure vessels (as shown on sheets 1, 2 & 3) are correct.

(date) 21.4.1965

JOZO LOZOVIC
TROGIR
(Signature)

(signature)

A previous similar case was for (name)

No

Port and Rpt. No.

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IDENTIFICATION MARKS (copies of certificates to be forwarded)

Thrust shaft

See Rpt.Rijeka No. 2055 ✓

Intermediate shafts

LLOYD'S SPT.No. 6621M ✓

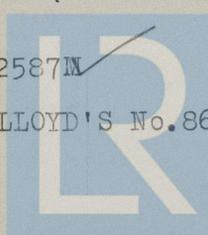
Screw ~~and~~ shafts

LLOYD'S SPT.No. 2587M ✓

Propellers

Work.propeller: LLOYD'S No.86036 ✓

Other important items



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DATES OF APPROVAL OF PLANS		Oil burning arrangements	
Straight shafting	7.2.63	Compressed air system	16.1.64.
	Two of 13m ³ each: See Rka Cert.15131	Main steam pipes	
Air receivers	one 250 litres:see Ct.Hannover 63/534	Boiler feed system	8.1.64 . . . 5.2.64
	Check one 50 litres:see Cert. Rijeka No.16206	Main boilers	. - . . .
Reversing gear & control	-		
Flexible coupling	-		
Separate fuel tanks	-	Superheaters	-
General pumping arrangements	-		
Bilge, ballast & oil fuel pumping arrangements in the machinery space	18.11.63 & 16.1.64, 30.1.64	Aux. boilers	see Rijeka Rpt.No.2238 and 2251
		Donkey boilers	-
		Feed water economisers	-
Oil fuel piping & fittings at settling & service tanks	16.1.64	Steam heated steam generators Propeller (including spare, if supplied)	- . . .
Cargo oil pumping arrangements	4.6.63.	Stern gear Oil-retaining gland (if not shown on shafting plan)	- . . .

DATES OF EXAMINATION OF:-			
Fitting of stern tube	14.7.64	Alignment* of straight shafting	26.12.64 (light)
Fitting of propeller	17.7.64	Testing of pumping arrangements	12.1.64; 13.1.64; 22.1.64; 21.1.64
Completion of sea connections	12.2.65	Oil fuel lines	15.1.64
Alignment* of crankshaft on board	26.12.64 (light)	Boiler supports	5.9.64 (Scotch boiler) 20.10.64 (Ex.gas b.)
Alignment* of turbines/engines & gearing	---	Steering machinery	16.3.65
Holding down bolts & chocks	26.12.64	Windlass	16.3.65

*State if aligned when ship in light, ballast or loaded condition

† The machinery reported above has been constructed and installed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the machinery is eligible, in my opinion, to be classed. ‡

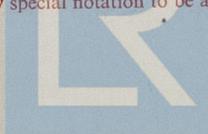
‡ LMC 4/65; TS(CL) 4.65; 2 Aux. 170 and 85 lbs 4/65.

(Dipl. Ing. M. Dražnović)
Surveyor to Lloyd's Register of Shipping

Date of Committee FRIDAY 28 MAY 1965

Minute + LMC ES
BAS
SPS
TS(CL) } 4.65

- † (a) If the installation contains any features of a novel or experimental nature, give particulars.
- (b) If centralised and/or bridge control is fitted for main propelling and/or essential auxiliary machinery, state on a Rpt-(cont.) where the control room is situated, the machinery controlled from it and give a brief description of the control system, including any automatic system for controlling essential auxiliary machinery.
- ‡ Include any special notation to be assigned.



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NOTE.—Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.

Rpt. 5 SGE (Inst) REPORT ON INSTALLATION OF STEAM HEATED STEAM GENERATORS
EXHAUST GAS HEATED BOILER OR EXHAUST GAS HEATED ECONOMISER

Received London

(For use with Cert. SG or Cert. E)

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

Ship's Name	m.t. "R.I. SORONG"	Port	SPLIT
Gross tons	4156	Date of completing rpt.	21.4.1965
Attached to (Port)	Rijeka	Cert. SGE No.	2251
No. of visits on ship	4	First date	20.10.64
Ship built by	Shipyard "J.L. MOSOR" - Trogir	Yard No.	137
Component installed by	Shipyard "J.L. Mosor" - Trogir	When	Yr. Mo. 1965 4

Steam generator, exhaust gas boiler or exhaust gas economiser Exhaust gas boiler

For boilers only: Auxiliary ~~or bunker~~ (See key to R.B.) Auxiliary

SAFETY VALVES

*Makers Tvornica Parnih Kotlova - Zagreb

*Type One double High lift

*No. and diameter	As approved	1655 mm ²	(2 x 70 mm ²)
	As fitted	7700 mm ²	

Are safety valves fitted with casing gear? Yes

Are drains fitted to all safety valve chests? Yes
 Are safety valves of each exhaust gas heated economiser and each exhaust gas heated boiler which may be used as an economiser provided with entirely separate waste steam pipes and drains?

Are drains fitted to principal boiler mountings for steam? Yes

No. and type of water level indicators, each boiler One

Smallest distance between boiler or exhaust piping and oil bunkers or woodwork -

DECLARATION TO BE SIGNED BY INSTALLING ENGINEERS

To the best of our knowledge the component has been installed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of installation are correct.

BRODOGRADILISTE
 JOZO LEBZOVIC
M. P. Brajnović
 (signature)

(date) 21.4.1965

A previous similar case was for (Name) -

Port - Rpt. No. -

DECLARATION TO BE COMPLETED AND SIGNED BY SURVEYOR AT PORT OF INSTALLATION

The described in (Port)

Cert. ~~SGE~~ No. 2251 has been securely fitted in the (Name) m.t. "R.I. SORONG"

in accordance with the Rules under my inspection and to my satisfaction, examined under working conditions, and the safety valves adjusted to 85 lbs. . A satisfactory accumulation test was carried out. The spare gear

required by the Rules has been supplied. The

installation is eligible, in my opinion, for the notation

Aux. 85 lbs 4,65

Date of Committee FRIDAY 28 MAY 1965

Minute See Prot. 1.



M. P. Brajnović
 (Dipl. Ing. M. Brajnović)
 Surveyor to Lloyd's Register of Shipping

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 4/14
 6086

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