

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

Received London

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				
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 boilers made by	Oil fired: Tvornica Parnih Kotlova		5162	When 64	
	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		NEW £135,100 + Din 276,650		
Fee	£162-10-0 & Din. 341.250.-		OLD £132,000 + Din. 277,200		
Expenses	see Rpt.1				
MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE					
To be reported on Rpt. 4b (Cons)	See Rka Rpt	Port	RIJEKA	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	Two		
*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 Fresh water		
No. of fresh water coolers	Two	Lub. oil	FUEL VALVES Fuel Oil		

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.R. 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^{ER}

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~~ boilers (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?

Yes

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~~ boilers (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
No. of evaporators

One

One

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Ship's Name m.t. "R.I. SORONG"

Port SPLIT

Rpt. No. 2589

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 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

Corresponding RPM
of propeller

170

MN

700

Integral with
flywheel shaftThickness 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/shaft

S.M. Steel

Material

S.M. Steel

Minimum approved
tensile strength44 kg/cm²Minimum approved
tensile strength44 kg/cm²

Is an oil gland fitted?

No

INTERMEDIATE SHAFT

Diameter

280 mm

What type?

Material

S.M. Steel

If an approved type,
state nameMinimum approved
tensile strength44 kg/cm²Length of bearing next
to and supporting propeller1000 mm
1260 mmSCREWSHAFT. 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?

-

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

Thickness of screw/shaft
liner at bearings

fwd 20; Aft 20 mm

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?

-

PROPEL- LER	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	2954.5 mm	4.9974 m ²
Spare	Cast Iron	--	"	R.H.	4	3623 mm	2777	5.0

FOR ICE STRENGTHENING ONLY

PROPEL- LER	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

No. of oil coolers Two

Can normal supply be maintained
with any one pump out of action? Yes with 1 p.

No. of duplex oil strainers One

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

-

Are the strainers of magnetic type? No, mech. type

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

SUCTION PRESSURE

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								X							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 (125 mm)

No. and size connected to main bilge line in:—

Main engine room

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.)

Aux. engine room

Boiler room Platform three 2" to tunnel

Tunnel One 3" aft centre ✓

Are all suction of non-return type?

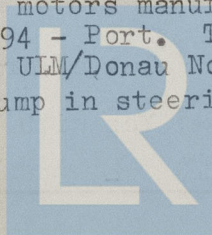
Yes

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.



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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	Klöckner-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
Has the manoeuvring of the main engines been tried and found satisfactory?

16.3.1965

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

(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 other shafts

LLOYD'S SPT.No. 2587M ✓

Propellers

Work.propeller: LLOYD'S No.86036 ✓

Other important items

DATES OF APPROVAL OF PLANS

Oil burning
arrangements

Straight shafting 7.2.63

Compressed
air system

16.1.64.

Two of 13m3 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

one 50 litres:see
Cert. Rijeka No.16206

Main boilers

Reversing gear & control -

Flexible coupling -

Superheaters -

Separate fuel tanks -

General
pumping arrangements -

Aux. boilers see Rijeka Rpt.No.2238
and 2251

Bilge, ballast & oil fuel
pumping arrangements in
the machinery space 18.11.63 & 16.1.64,
30.1.64

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

Holding down bolts
& chocks 26.12.64

16.3.65

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

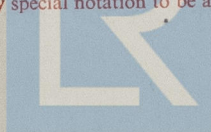
Minute

† 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** Rpt. No. **2589**
 Attached to (Port) **Rijeka** Cert. ~~SGE~~ No. **2251** Place of survey, if different from above **TROGIR**
 No. of visits on ship **4** First date **20.10.64** Last date **16.3.65**
 Ship built by **Shipyard "J.L. MOSOR" - Trogir** Yard No. **137** When **1965** Yr. **4**
 Component installed by **Shipyard "J.L. Mosor" - Trogir**

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

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

SAFETY VALVES

*Makers **Tvornica Parnih Kotlova - Zagreb**

*Type **One double High lift**

*No. and diameter { As approved **1655 mm² (2 x 70 mm²)**
 As fitted **7700 mm²**

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.

(date) **21.4.1965**

BRODOGRADILISTE
JOZO LEBRVAR
(signature)

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 Rpt. 1.**



(Dipl. Ing. M. Brajnović)
 Surveyor to Lloyd's Register of Shipping
Lloyd's Register
 Foundation
6086

NOTE:--The particulars in this report are to be stated as fully and clearly as practicable. Where the answer is "no" or "none", say so. Ticks and other signs of doubtful meaning are not to be used. Wording not applicable to be cancelled. Where items are marked with an asterisk * the particulars need not be repeated here if they are given on the relevant Cert. SG or Cert. E.