

Rpt. 13.

No. 35331

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

14 APR 1950

Received at London Office.

Date of writing Report 22.3.50 19... When handed in at Local Office... 19... Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 4.10.49 Last Survey 28.3.50 19...
Reg. Book. (No. of Visits 19)

on the s.s. "SOYA CHRISTINA" Tons { Gross 1363
Net 3968

Built at Sunderland By whom built Short Bros. Ltd Yard No. 507 When built 1950

Owners Rederi A/B Soya Port belonging to Stockholm

Installation fitted by Campbell & Isherwood When fitted 1950

Is vessel equipped for carrying Petroleum in bulk yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. yes Sub.Sig. no Radar yes

Plans, have they been submitted and approved yew System of Distribution 2-wire - Voltage of Lighting 110

Heating - Power 110 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency -

Prime Movers, has the governing been found as per Rule when full load is thrown on and off - Are turbine emergency governors fitted with a trip switch - Generators, are they compound wound yes, and level compounded under working conditions yes, if not compound wound state distance between generators - and from switchboard - Are the generators arranged to run in parallel yes, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates of test for machines under 100 kw. been supplied yes and the results found as per Rule yes

Position of Generators Steam: On raised stools P.&S. below switchboard flat. Diesel, near switchboard. is the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil yes Switchboards, where are main switchboards placed on raised flat aft of main engine

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil yes, what insulation is used for the panels "Sindanyo" Grade C.15.25, if of synthetic insulating material is it an Approved Type yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgear for each generator and arrangement of equaliser switches a triple-pole (one pole for equaliser) air-break circuit breaker fitted with O/L and R/V current tripping devices.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit a double-pole knife switch and fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 3 ammeters 3 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided E.lamps

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes, make of fuses "ZED", are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate -, and at what current do the reversed current protective devices operate -

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule yes

Cables, are they insulated and protected as per Rule yes, if otherwise than as per Rule are they of an Approved Type -, state maximum fall of pressure between bus bars and any point under maximum load less than 6v, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets yes Are all paper insulated and varnished cambric insulated cables sealed at the ends yes Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage yes, are any cables laid under machines or floorplates no, if so, are they adequately protected - Are cables in machinery spaces, galleys, laundries, etc., lead covered Pyro or run in conduit - or of the "HR" type - State how the cables are supported or protected Main feeders along fore & aft gangway are V.C.L.C.A.B. on heavy steel channel; Machinery spaces, L.C.B. & Pyro, accommodation, L.C.B on the surface clipped to wooden grounds and protected as required by wood or metal guards.

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed yes Refrigerated chambers, are the cables and fittings as per Rule yes

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule...yes..... Emergency Supply, state position

Navigation Lamps, are they separately wired...yes...controlled by separate double pole switches and fuses...yes... Are the switches and fuses in a position accessible only to the officers on watch...yes... is an automatic indicator fitted...yes... Is an alternative supply provided...yes...

Secondary Batteries, are they constructed and fitted as per Rule... are they adequately ventilated... state battery capacity in ampere hours...

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof...yes...

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present...yes... if so, how are they protected... "REVO" Flameproof Lighting fittings as approved in centrecasle

and where are the controlling switches fitted... in officers quarters... Are all fittings suitably ventilated...yes...

Searchlight Lamps, No. of... whether fixed or portable... are they of the carbon arc or of the filament type...

Heating and Cooking, is the general construction as per Rule...yes... are the frames effectually earthed...yes... are heaters in the accommodation of the convection type... Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil...yes...

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing...

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule...yes...

Control Gear and Resistances, are they constructed and fitted as per Rule...yes... Lightning Conductors, where required are they fitted as per Rule... Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with...yes... are all fuses of an Approved Cartridge Type...yes... make of fuse... "ZRD" Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships...yes... Are the cables lead covered as per Rule...yes... E.S.D., if fitted state maker... Hughes... location of transmitter... Frame 49/50.P... and receiver... ditto Starb.

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations...yes...

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory...yes...

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	Campbell & Isherwood	45	110	409	600	Steam	Reader
EMERGENCY ... ROTARY TRANSFORMER	1	ditto	30	110	273	1000	Diesel	Lister

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	45	1	37/.103	409	408	70	V.C.	L.C.B.
" " EQUALISER ...	45	2	37/.072	409	260	35	"	"
" " eq.	45	1	37/.103	409	408	78	"	"
" " eq.	30	3	37/.072	260	39	"	"	"
" " eq.	30	1	37/.083	273	314	20	"	"
" " eq.	30	1	19/.083	202	10	"	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Sub-Switchboard - main feeder	1	37/.072	178	260	510	V.C.	L.C.A.B.
ditto aux. do	1	37/.072	-	260	510	"	"
Capt's.Pantry, off Sub.Switchboard	1	19/.044	37	53	21	V.I.R.	L.C.B.
Officers House S.B.	1	19/.044	40	53	15	"	"
Ventilation, midships S.B.	1	19/.044	51	53	90	"	"
Midships Pantry S.B.	1	19/.044	45	53	45	"	"
Gyro Panel	1	19/.044	30	53	90	"	"
Eng.Rm.Vents - off main board	1	7/.064	36	80	180	V.C.	L.C.B.
" " " Panel " " " 'J'	1	19/.052	93	110	45	"	"
" " " 'K' " " " "	1	19/.052	50	104	45	"	"
" " " 'M' " " " "	1	7/.064	38	80	45	"	"
Galley Panel	1	19/.052	82	104	60	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Poop Deck 'P'	1	19/.052	45	110	90	V.C.	L.C.B.
Engine Room Ltg. 'R'	1	19/.052	64	110	45	"	"
Navigation - main supply	1	7/.036	5	24	120	V.I.R.	"
ditto aux. supply	1	7/.036	-	24	10	"	"
Wheelhouse DB. 'A.1'	1	7/.036	16	24	45	"	"
Capt's.House DB. 'A.2'	1	7/.036	21	24	15	"	"
Officers House DB Port- 'B.1'	1	7/.036	19	24	30	"	"
" " Star. 'B.2'	1	7/.036	21	24	75	"	"
Gyro Supply	1	7/.044	30	31	30	"	"
Radar Supply	1	19/.052	40	110	90	V.C.	"
W/T Supply	1	19/.052	25	110	90	"	"
Suez Canal Proj.(wiring only)	1	19/.052	-	110	480	"	"
Forecastle DB. 'F.1'	1	7/.064	15	46	300	V.I.R.	"
Mast Floods DB. 'G.1'	1	7/.064	18	46	60	"	"
Eng.Room Ltg.DB. 'L.1'	1	7/.064	28	80	45	V.C.	"
Boat Floods DB. 'M.1'	1	7/.044	28	31	30	V.I.R.	"
Boat Deck DB. 'P.1'	1	7/.036	15	24	90	"	"
" " " 'P.2'	1	7/.036	27	24	30	"	"
" " " 'P.3'	1	7/.036	22	24	60	"	"
Eng.Room Ltg DB. 'R.1'	1	7/.036	19	24	90	"	"
" " " 'R.2'	1	7/.036	23	24	90	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Midship Vent Fan	1	2	1	7/.036	18	24	30	V.I.R.	L.C.B.
ditto	1	2	1	7/.036	18	24	60	"	"
F.W.Mono Pump	1	1.5	1	7/.036	13	24	65	"	"
Eng.Room Vent Fan	2	2	1	7/.036	18	24	2/60	"	"
Lathe Motor	1	3	1	7/.044	26	31	62	"	"
Shaping Machine	1	3	1	7/.044	26	31	68	"	"
Milling Machine	1	3	1	7/.044	26	31	64	"	"
F.W. Mono Pump	1	1.5	1	7/.036	13	24	60	"	"
S.W.Mono Pump	1	1.5	1	7/.036	13	24	62	"	"
Chipping Machine	2	1	1	3/.036	9	10	2/150	"	"
Mono Pump - Genrtr.Cooling	1	1/2	1	3/.036	5	10	40	"	"
Refrig Motor	1	4	1	7/.064	35	46	60	"	"
Refrig.Circ.Pump	1	1	1	7/.036	9	24	50	"	"

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

CAMPBELL & ISHERWOOD, LTD.

Electrical Contractors.

Date 23-3-50

COMPASSES.

Have the compasses been adjusted under working conditions. yes

SHORT BROTHERS, LIMITED

Builder's Signature

Date 31.3.1950

Have the foregoing descriptions and schedules been verified and found correct. yes

Is this installation a duplicate of a previous case. no If so, state name of vessel. -

Plans. Are approved plans forwarded herewith. yes If not, state date of approval. -

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. yes

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical equipment of this vessel has been installed under special survey in accordance with the approved plans and Section 15 of the "Rules For Electrical Equipment". The materials and workmanship are good. On completion satisfactory trials of the equipment were witnessed and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a vessel bearing the Society's class.

Noted Jan 28/4/50.

Total Capacity of Generators (2 x 45, 1 x 30) 120 Kilowatts.

The amount of Fee ... £ 58 : 0 : 0

When applied for, APR 1 1950

When received,

Travelling Expenses, (if any), £ : : 19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 5 MAY 1950

Assigned See F.E. moly. spl.

2m. 9.46.—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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