

t. 13.

No. 26224.

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19/10 1960 When handed in at Local Office 26/10 1960 Received at London Office Port of GOTHENBURG

Survey held at Uddevalle Date, First Survey 11/2-60 Last Survey 1/10 1960  
(No. of Visits 29)

Registered on the s/s GEORGE L. PARKHURST Tons Gross 39,966  
Net 27,486  
Built at Uddevalle By whom built Sörviksvarvet AB Yard No. 202 When built 1960

Owners California Shipping Corporation Port belonging to Monrovia  
Installation fitted by Messrs. Andersson & Callenburg When fitted 1960

Vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. - Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 3 phase - 3 wire Voltage of Lighting 115 V  
Rating 220 V Power 440 V D.C. or A.C., Lighting AC Power AC If A.C. state frequency 60 c/s

Machine Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted -

Diameter of a trip switch - Generators, are they compound wound -, and level compounded under working conditions -  
No. and position of the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole -

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines -  
Have machines under 100 kw. been supplied and the results found as per Rule Yes Position of Generators P & S on manoeuvring platform

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 manoeuvring platform

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 Dead front switchboard, fittings mounted on insulated bases, 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 3-pole circuit breaker with overload and reverse power tripping

Is the switch and fuse gear (or circuit breakers) for each outgoing circuit 3-pole circuit breaker

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

Preference Tripping, state if provided -, and tested -  
Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes  
Type of fuses Stotz & Merlin Gerin, are all fuses labelled Yes If circuit breakers are provided for the generators, at what current do they operate 50 % overload, and at what current do the reverse current protective devices operate 30 KW and 9-12 sec.

Cables, are they insulated and protected as per Rule -  
If otherwise than as per Rule are they of an Approved Type Yes, state maximum fall of pressure between bus bars and any point of maximum load Below Rule Perm. Are all paper insulated and varnished cambric insulated cables sealed at the ends Yes

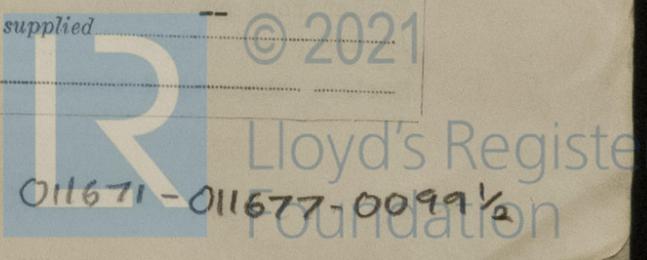
Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes, are any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes State location of cables (if in conduit this should also be stated) in machinery spaces VC.IC.BB., galleys VC.IC.BB.

State how the cables are supported or protected Supported by metal clips. All cables VC.IC.BB. Lighting cables R.IC.BB., and VIR.B. where drawn in conduits behind panels.

Are 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 adequately bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes

Are refrigeration fan motors been constructed under survey - and test certificates supplied -  
Are refrigeration fan motors accessible for maintenance at all times -

Surveyor to sign



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

In a separate compartment on poopdeck.

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, fitted and adequately ventilated as per Rule. ---, state battery capacity in ampere hours. --- Where required to do so does it comply with 1948 International Convention. ---

Lighting, is fluorescent lighting fitted. Yes If so, state nominal lamp voltage. 115 V and compartments where lamps are fitted.

ER, BR messrooms, galley corridors etc.

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

Searchlights, No. of ---, whether fixed or portable. Connection provided, 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. Yes 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. Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. Yes

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

Lightning Conductors, where required are they fitted as per Rule. ---

Ships carrying Oil having a Flash Point of 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 Stotz & Merlin Gerin Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. Yes Are all cables lead covered as per Rule. Yes

E.S.D., if fitted state maker. Electroaustic location of transmitter and receiver. Spec. d in ER stbd side

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.	MAKER.
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	2	General Electric	750	450	1202	1200	Turbine	General Electric
EMERGENCY ROTARY TRANSFORMER	1		100	450	160	1200	Diesel Eng	Süddeutsche Bremsen AG

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area in the Circuit.				
MAIN GENERATOR	2	750	5	TH. CIRC. MILS 3 x 400	1202	1465	20.	VC. LC. BB.
EQUALISER								
EMERGENCY GENERATOR	1	100	1	3 x 212	160	195	20	" " "
ROTARY TRANSFORMER: MOTOR GENERATOR.								

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
450V Aft. light transformer	3x25KVA	1	3 x 66	98	90 <sup>100</sup>	10/10	VC LC BB
120V Aft. lgt. transformer secondary		2	3 x 212	370	390 <sup>430</sup>	"	" " "
450V Aft. emergency light transformer	3x10KVA	1	3 x 16	39.3	37 <sup>44</sup>	10/10	" " "
120V Aft. em. lgt. transformer secondary		1	3 x 133	150	144 <sup>163</sup>	"	" " "
Fwd. emergency light transformer	3x10KVA	1	3 x 16	39.3	37 <sup>44</sup>	25/25	" " "
Fwd. light transformer	3x10KVA	1	3 x 16	39.3	37 <sup>44</sup>	25/25	" " "
450V Galley power transformer	3x25KVA	1	3 x 66	98	90 <sup>100</sup>	185/20	" " "
220V Galley power transformer secondary		1	3 x 212	196	195 <sup>215</sup>	20	" " "
Shore connexion		1	3 x 212	200	195 <sup>215</sup>	200	" " "
ER power panel SB		1	3 x 250	218	217 <sup>238</sup>	75	" " "
" " " PS.		1	3 x 133	133	144 <sup>163</sup>	90	" " "
Boiler room power panel		1	3 x 133	117	144 <sup>163</sup>	105	" " "
Amidship switchboard		1	3 x 133	135	144 <sup>163</sup>	460	" " "
Machine shop power panel		1	3 x 16	40	37 <sup>44</sup>	70	" " "

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.	
	No. in Parallel per Pole.	Sectional Area in the Circuit.	In the Circuit.	LR Rule.			LC	BB
Midship lighting distr. panel	1	TH. CIRC. MILS 3 x 133	113	144 <sup>163</sup>	25	VC	" " "	
Nav. bridge lighting	1	3 x 6	13	16 <sup>22</sup>	70	"	" " "	
Upper bridge	1	3 x 10	22	25 <sup>34</sup>	30	"	" " "	
Lower " " "	1	3 x 33	60	59 <sup>70</sup>	15	"	" " "	
Forecastle " " "	1	3 x 33	23	59 <sup>70</sup>	170	"	" " "	
Main deck aft. lighting SB	1	3 x 33	65	59 <sup>70</sup>	75	"	" " "	
" " " " PS	1	3 x 33	61	59 <sup>70</sup>	75	"	" " "	
Main deck lighting SB fwd. panel	1	3 x 10	33	25 <sup>34</sup>	70	"	" " "	
" " " " SB aft. " "	1	3 x 16	32	37 <sup>44</sup>	130	"	" " "	
" " " " PS fwd. panel	1	3 x 10	33	25 <sup>34</sup>	35	"	" " "	
" " " " PS aft. " "	1	3 x 10	28	25 <sup>34</sup>	100	"	" " "	
Poopdeck & above lighting	1	3 x 66	94	90 <sup>100</sup>	75	"	" " "	
Poop & boat deck lighting fwd. panel	1	3 x 16	36	37 <sup>44</sup>	50	"	" " "	
Poop deck lighting SB aft. panel	1	3 x 10	29	25 <sup>34</sup>	85	"	" " "	
Poop deck lighting PS aft. panel	1	3 x 10	29	25 <sup>34</sup>	120	"	" " "	
ER & pump room lighting	1	3 x 66	95	90 <sup>100</sup>	60	"	" " "	
ER light SB lower panel	1	3 x 10	28	25 <sup>34</sup>	90	"	" " "	
" " " " upper " "	1	3 x 6	12	16 <sup>22</sup>	90	"	" " "	
ER light PS lower panel	1	3 x 10	29	25 <sup>34</sup>	10	"	" " "	
" " " " PS upper " "	1	3 x 6	12	16 <sup>22</sup>	145	"	" " "	
Pump room lighting panel	1	3 x 20	43	45 <sup>50</sup>	130	"	" " "	
Boiler room lighting panel	1	3 x 16	30	37 <sup>44</sup>	10	"	" " "	
ER & ref. plant panel	1	3 x 20	3	45 <sup>50</sup>	10	"	" " "	
Navigation lighting panel	1	3 x 66	26	90 <sup>100</sup>	260	"	" " "	
Zues Canal Searchlight	1	3 x 66	3	90 <sup>100</sup>	30	"	" " "	
Radio	1	2 x 6	7	19 <sup>22</sup>	30	"	" " "	

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.
Main circ. pump	1	150	3 x 400	224	293 <sup>319</sup>	75	VC LC BB
Main condensate pump	2	40	3 x 33	50	59 <sup>70</sup>	55	" " "
Forced draught fan	2	150	3 x 250	190	217 <sup>238</sup>	185	" " "
Aux. circ. pump	1	30	3 x 33	42.5	59 <sup>70</sup>	30	" " "
Atm. condenser circ. pump	1	30	3 x 33	38	59 <sup>70</sup>	25	" " "
Steering gear pump	2	90	3 x 400	236	293 <sup>319</sup>	200	" " "
Fuel oil service pump	2	20	3 x 10	25	25 <sup>34</sup>	50	" " "
Lub. oil pump	2	40	3 x 33	50	59 <sup>70</sup>	85/130	" " "
Bilge & fire pump	2	58	3 x 66	69	90 <sup>100</sup>	150/90	" " "
Sanitary pump	2	38	3 x 33	46	59 <sup>70</sup>	50/50	" " "
Atm. drain pump	3	19	3 x 10	25	25 <sup>34</sup>	85/85/85	" " "
HP heater drain pump	2	7.5	3 x 6	9.7	16 <sup>22</sup>	25/25	" " "
Turning gear	1	10	3 x 6	13	16 <sup>22</sup>	50	" " "
Boiler starting up pump	1	3	3 x 6	4.2	16 <sup>22</sup>	90	" " "
Control air compressor	1	11	3 x 6	15	16 <sup>22</sup>	55	" " "
Service air compressor	2	30	3 x 20	37	45 <sup>50</sup>	50/50	" " "
Ref. compressors	2	8	3 x 6	10.5	16 <sup>22</sup>	40/40	" " "
ER vent. fan	2	35	3 x 33	49	59 <sup>70</sup>	35/75	" " "
BR " " "	2	13	3 x 6	17.2	16 <sup>22</sup>	45/90	" " "
Air cond. compressor	2	30	3 x 33	37.5	59 <sup>70</sup>	45/45	" " "

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient.

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.

*A. Holman*

Electrical Contractors.

Date

21/10-60

COMPASSES.

Have the compasses been adjusted under working conditions.

UDDEVALLANARVET

*[Signature]*

Builder's Signature.

Date

21/10-60

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

Is this installation a duplicate of a previous case. If so, state name of vessel.

Appd. NYK 4.12.58.

Plans. Are approved plans forwarded herewith. Got. 15/6 & 13/7-60. If not, state date of approval. NYK 4/12-58, Got. 15/6 & 13/7-60.

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) This electric installation has been built under Special Survey in accordance with the Rules and approved plans. Workmanship and material used are good and test sheets in respect of generators and essential motors are attached.

The installation has been tested under working conditions on a trial trip and found satisfactory.

5m.6.56 - Transfer. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 1600 Kilowatts.

The amount of Fes ... Kr. 2730:-: When applied for, 26/10 19 60

Travelling Expenses (if any) £ ---: When received, --- 19 ---

*[Signature]*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 27 JAN 1961

Assigned See Rpt. 1.



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+ RMS  
1.11.60