

Rpt. 13.

No. 86471

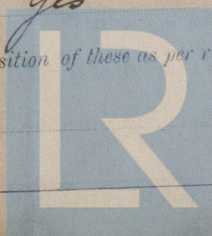
REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 25 NOV 1930

Received at London Office

Date of writing Report 19 When handed in at Local Office 24/11/30 Port of NEWCASTLE ON TYNE
No. in Survey held at NEWCASTLE Date, First Survey 18 Aug Last Survey 13 Nov 1930
Reg. Book. 89935 on the M.V. CHEYENNE (Number of Visits 7)
Built at NEWCASTLE By whom built PALMERS S.B. & I. Co Yard No. 1001 When built 1930
Owners ANGLO-AMERICAN OIL CO LTD Port belonging to NEWCASTLE
Electric Light Installation fitted by PALMERS S.B. & I. Co. Contract No. 1001 When fitted 1930
Is the Vessel fitted for carrying Petroleum in bulk YES

System of Distribution Double Wire
Pressure of supply for Lighting 110 volts, Heating — volts, Power 110 volts.
Direct or Alternating Current, Lighting Direct Power Direct
If alternating current system, state frequency of periods per second —
Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes (see note)
Generators, do they comply with the requirements regarding rating Yes, are they compound wound Yes
are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator —
Where more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in series with each shunt field Yes
Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes
Position of Generators Port Side of Engine Room
is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes
if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —, are the generators protected from mechanical injury and damage from water, steam or oil Yes
are their axes of rotation fore and aft Yes
Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes
Main Switch Boards, where placed Engine Room Starboard forward
If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —
Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes
are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —
are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework —
and is the frame effectively earthed Yes Are the fittings as per Rule regarding: — spacing or shielding of live parts Yes, proportion of omnibus bars Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, connections of switches Yes
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches D.P. Circuit Breaker with interlocked equalizer switch for each generator; D.P. Switch & D.P. Fuses for each outgoing circuit except D.P. Circuit Breaker (300 amp) for Sea Water Circulating Pump.
Instruments on main switchboard 3 ammeters 3 voltmeters — synchronising device for paralleling purposes.
Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Earth Cams with S.P. Switches and fuses on both poles
Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes
Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Cast Iron
Cases with Porcelain Fuse Units



Lloyd's Register

WS10-02746

Cables: Single, twin, concentric, or multicore *Single & twin* are the cables insulated and protected as per Tables IV or V of the Rules *Yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *50 volts for lighting: 70 volts for Power*

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets *Yes*

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage *Yes*

Support and Protection of Cables, state how the cables are supported and protected *Lead covered & armoured cables supported by galv. In clips secured to structure; In accommodation lead covered & braided cables secured by brass clips.*

If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII *Yes*

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *None fitted*

Joints in Cables, state if any, and how made, insulated, and protected *None made*

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands *Yes*

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *Yes* state the material of which the bushes are made *Lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas

are their connections made as per Rule —

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *Yes*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *Emergency lights in machinery space fed from two 12 volt Batteries with Charging Panel on main switchboard. Lights automatically switched on when general lighting fails*

Navigation Lamps, are these separately wired *Yes*, controlled by separate switch and separate fuses *Yes*, are the fuses double pole *Yes*, are the switches and fuses grouped in a position accessible only to the officers on watch *Yes*

has each navigation lamp an automatic indicator as per Rule *Yes*

Secondary Batteries, are they constructed and fitted as per Rule —

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight *Yes* are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected *None fitted*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Yes in Pump Room*

Heavy gaslight glass globe fittings only accessible from outside how are the cables led *Lead covered, armoured and braided cable entirely outside Pump Room*

where are the controlling switches situated *fitted in locked case in midship accommodation*

Searchlight Lamps, No. of —, whether fixed or portable —, are their fittings as per Rule —

Arc Lamps, other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

Motors, are their working parts readily accessible *Yes*, are the coils self-contained and readily removable for replacement *Yes*

are the brushes, brush holders, terminals and lubricating arrangements as per Rule *Yes*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *Yes*

are they protected from mechanical injury and damage from water, steam or oil *Yes* are their axes of rotation fore and aft *Yes, except workshop lathe motor & 3 small pumps which are in midship, and four vertical duty pumps*

if situated near unprotected woodwork or other combustible material are the motors of the totally enclosed, pipe ventilated, forced draught, drip & flame proof type *Yes*, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *Yes*

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule *Yes*

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings *Yes*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *Yes*

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	45	110	409	400	4 Cyl. Diesel Engine		
AUXILIARY	1	45	110	409	400	2 Cyl. Steam Engine		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.5	61	.103	409	486	200	V.C.	L.C. Arm'd & Braided
EQUALISER CONNECTIONS	1	.5	61	.103		486	100	V.C.	d. d. d.
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	.01	7	.044	206	38	180	V.C.	L.C. Arm'd & Braided
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION	1	.0225	7	.064	42.9	68	360	V.C.	L.C. Arm'd & Braided
do Midships	1	.10	19	.083	43.7	172	640	V.C.	d. d. d.
WIRELESS	1	.0225	7	.064	24	68	700	V.C.	L.C. Arm'd & Braided
SEARCHLIGHT	1	.00194	3	.029	36	7.8	540	Macanite	d. d. d.
MASTHEAD LIGHT	1	.00194	3	.029	36	7.8	90	do	d. d. d.
SIDE LIGHTS	1	.00194	3	.029	26	7.8	26	do	L.C. & Braided
COMPASS LIGHTS	1	.00194	3	.029	36	7.8	810	do	L.C. Arm'd & Braided
STERN LIGHT	1	.003	3	.026	3.27	120	410	do	d. d. d.
CARGO LIGHTS	1	.003	3	.026	3.27	120	410	do	d. d. d.
ARC LAMPS									
HEATERS	1	.00194	3	.029	7.3	7.8	110	do	L.C. & Braided

MOTOR CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. of Motors.	No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.		
BALLAST PUMP									
MAIN BILGE LINE PUMPS									
GENERAL SERVICE PUMP	1	1	.12	37	.064	188	189	64	V.C. L.C. Arm'd & Braided
EMERGENCY BILGE PUMP									
SANITARY PUMP									
CIRC. SEA WATER PUMPS	1	1	.2	87	.083	249	266	110	V.C. L.C. Arm'd & Braided
CIRC. FRESH WATER PUMPS	2	1	.12	37	.064	172	189	130	do d. d. d.
AIR COMPRESSOR	1	1	.12	37	.064	172	189	80	do d. d. d.
FRESH WATER PUMP									
ENGINE TURNING GEAR	1	1	.075	19	.072	136	141	250	do d. d. d.
ENGINE REVERSING GEAR									
LUBRICATING OIL PUMPS	2	1	.0145	7	.052	50	51	175	do d. d. d.
OIL FUEL TRANSFER PUMP									
WIRELESS GALLEY COMPRESSOR	1	1	.003	3	.036	2.3	12	196	Macanite d. d. d.
WINCHES, FORWARD									
Valve Lifting Pump	1	1	.003	3	.036	7.5	12	80	do d. d. d.
Valve Cooling Pumps	2	1	.003	3	.026	11.3	12	54	do d. d. d.
VAPOUR EXTRACTOR	1	1	.0045	7	.029	15	18.2	214	do d. d. d.
STEERING GEAR									
(a) MOTOR GENERATOR									
(b) MAIN MOTOR	2	1	.10	19	.083	128	172	390	V.C. L.C. Arm'd & Braided
WORKSHOP MOTORS (See table)	4	1	.03	19	.044	77	78	204	V.C. L.C. Arm'd & Braided
VENTILATING FANS 7 1/2 inch	2	1	.003	3	.036	5	12	90	Macanite d. d. d.
Grain Motor	1	1	.007	7	.026	23	25	196	V.C. do d. d.
Lathe	1	1	.0046	7	.029	18	18.2	82	Macanite do d. d.
Drilling Machine	1	1	.0046	7	.029	18	18.2	98	do do d. d.
Grinding Machine	1	1	.0046	7	.029	18	18.2	26	do do d. d.
Oil Purifiers	2	1	.007	7	.036	23	25	68	V.C. do d. d.
Refr. Compressor	1	1	.03	19	.044	7.5	78	220	V.C. do d. d.
Refr. Brine Pump	1	1	.003	3	.036	7.5	12	34	Macanite do d. d.
Refr. Circulating Pump	1	1	.003	3	.036	7.5	12	132	do do d. d.

WS10-027472

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

W. R. Pomeroy

Electrical Engineers.



COMPASSES.

Distance between electric generators or motors and standard compass

221 ft

Distance between electric generators or motors and steering compass

215 ft

The nearest cables to the compasses are as follows:—

A cable carrying 28 Ampères on the feet from standard compass 7.5 feet from steering compass.

A cable carrying 28 Ampères 7.5 feet from standard compass on the feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power. Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted. Yes

The maximum deviation due to electric currents was found to be degrees on course in the case of the standard

compass, and degrees per course in the case of the steering compass.

PALMERS SHIPBUILDING & IRON Co., Ltd.

G. S. Williams

Builder's Signature.

Date 22nd Nov. 1930

SHIPYARD MANAGER

Is this installation a duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation has been fitted on board under special survey and has, except for No 2 generator, been tested under full working conditions. No 2 generator would not develop its full output due to incorrect fuel supply to the prime mover and this machine should be tested at a later date when the engine is running satisfactorily.

The materials and workmanship were found to be good and sound.

It is submitted that this vessel is eligible for THE RECORD. Erec. Light.

(R)
24/11/30

Total Capacity of Generators 135 Kilowatts.

The amount of Fee ... £ 33 : 5 : 0

When applied for, 24 NOV 1930

L. C. Clayton

Surveyor to Lloyd's Register of Shipping.

Travelling Expenses (if any) £

When received,

19.2.31

Committee's Minute

Assigned

Elec Lt



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