

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report **30.5.52** 19... When handed in at Local Office... 19... Received at London Office... **14 JUN 1952**
 Port of **Sunderland**
 Survey held at **Sunderland** Date, First Survey **25. 2.52** Last Survey **29.5.52** 19...
 Book. (No. of Visits **17**)
 on the **m.v. " CALTEX TANGANYIKA "** Tons { Gross **8525** Net **4809**
 built at **Sunderland** By whom built **Wm. Doxford & Sons Ltd** Yard No. **787** When built **1952**
 owners **Overseas Tankship (U.K) Ltd.** Port belonging to **London**
 installation fitted by **Campbell & Isherwood Ltd.** When fitted **1952**
 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**
 ns, have they been submitted and approved **yes** System of Distribution **2-wire ins.** Voltage of Lighting **110**
 eating **-** Power **PIO** D.C. or A.C., Lighting **D.C.** Power **D.C.** If A.C. state frequency **-**
 ime Movers, has the governing been found as per Rule when full load is thrown on and off **yes** Are turbine emergency governors fitted
 th a trip switch **-** Generators, are they compound wound **yes**, and level compounded under working conditions **yes**
 re the generators arranged to run in parallel **yes** Is the compound winding connected to the negative or positive pole **negative**
 ve machines 100 kw. and over been inspected by the Surveyors during manufacture and testing **yes** Have certificates of test for machines
 der 100 kw. been supplied and the results found as per Rule **yes** Position of Generators **Nos. 1. & 2. Engine Room**
floor level, Port side: No. 3, on raised deck Port side, over Nos. 1. & 2.
 the ventilation in way of generators satisfactory **yes** are they clear of inflammable material and protected from mechanical injury and
 image from water, steam and oil **yes** Switchboards, where are main switchboards placed **Engine Room on raised**
platform athwartships, fwd of main engine.
 e they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,
 am and oil **yes**, what insulation is used for the panels **Black matt. "Interohm"**, if of synthetic insulating
 aterial is it an Approved Type **yes**, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as
 r Rule **-** Is the construction as per Rule, including locking of screws and nuts **yes** Description of Main Switchgear
 r each generator and arrangement of equaliser switches **a triple-pole (one pole for equaliser) air-break**
circuit breaker fitted with O/L & R/V current tripping devices.
 d the switch and fuse gear (or circuit breakers) for each outgoing circuit **for large power:- a D.P. air-break circuit**
breaker with O/L trips on each pole. For other circuits;- a D.P. quick-break knife switch
and D.P. fuses.
 e compartments containing switchboards composed of fire-resisting material or lined as per Rule **yes** Instruments on main switchboard **3**
 ameters **3** 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 **yes** Earth Testing, state means provided **E. lamps**
 Preference Tripping, state if provided **no**, and tested **-**
 vitches, Circuit Breakers and Fuses, are they as per Rule **yes**, are the fuses an Approved Type **yes**
 ake of fuses **'Artic'**, are all fuses labelled **yes** If circuit breakers are provided for the generators, at what
 erload do they operate **10%**, and at what current do the reverse current protective
 vices operate **within 15 %** Cables, are they insulated and protected as per Rule **yes**
 otherwise than as per Rule are they of an Approved Type **-**, state maximum fall of pressure between bus bars and any point
 der maximum load **within 6** volts. Are all paper insulated and varnished cambric insulated cables secured at the ends **yes**
 re all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical
 mage **yes**, are any cables laid under machines or floorplates **no**, if so, are they adequately protected **-** State
 pe of cables (if in conduit this should also be stated) in machinery spaces **L.C.A.B.** galleys **L.C.A.B.**
 d laundries **-** State how the cables are supported or protected **Main feeders and cables along**
fore and aft gangways V.C.L.C.A.B. clipped to solid metal troughing on underside of gangway.
accommodation: L.C.B. cables clipped to the surface and protected where necessary by wood
metal guards.
 e all lead sheaths, armouring and conduits effectually bonded to earth **yes** Are all cables passing through decks and watertight
 lkheads provided with deck tubes or watertight glands **yes**, where unarmoured cables pass through beams, etc., are the holes
 ectively bushed **yes** Refrigerated chambers, are the cables and fittings as per Rule **yes**
 ipping refrigeration fan motors been constructed under survey **none fitted** and test certificates supplied **-**
 e the motors accessible for maintenance at all times **-**

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004003-004008-0169

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule...yes Emergency Supply, state position "Neverfail" emergency lighting system on failure of supply or E.R. lighting fuses.

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...yes state battery capacity in ampere hours... Where required to do so does it comply with 1948 International Convention...-

Lighting, is fluorescent lighting fitted...no If so, state nominal lamp voltage... and compartments where lamps are fitted...-

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 1 of 18" whether fixed or portable...fixed are they of the carbon arc or of the filament type...filament type

Heating and Cooking, is the general construction as per Rule... are the frames effectually earthed... 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...yes 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

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 fuse 'Artic' 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...Marconi location of transmitter and receiver...fr.No. 45/46

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.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Campbell & Isherwood Ltd.	150	110	1364	500	Diesel	Mirrless Bikerton & Day.
		Nos. 47050 & 47051						Nos. 34673 & 34674
EMERGENCY	1	Campbell & Isherwood Ltd.	50	110	455	750	Diesel	McLaren & Co. Ltd
		No. 46686						Cont. No. 30856
ROTARY TRANSFORMER								Eng. No. 50823

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 or No. and Dia. of Strands, Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	No. 1	150	4	37/.093	1364	1452	90	V.C.	L.C.B.
"	"	"	2	"	"	726	90	"	"
"	2	150	4	"	1364	1452	75	"	"
"	"	"	2	"	"	726	75	"	"
"	No. 3	50	1	61/.093	455	492	70	"	"
"	"	"	1	37/.083	"	314	70	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
"	"	"							

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

DESCRIPTION.	No. of	Kw.	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.
Engine Room Vents SB, E. & B.	1	19/.052	102	110	70	V.C.	L.C.A.B.		
" Machy Space Ltg Sec.	1	19/.044	40	92	40	"	"		
Shore Connection	2	37/.072	-	520	80	"	"		
Eng. Rm. Sub Switchboard No. 1.	1	37/.083	213	314	80	"	"		
" " " No. 2.	1	37/.083	258	314	98	"	"		
Galley Section 'K'	1	19/.052	86	110	220	"	"		
Midship Sub Switchboard No. 1.	1	37/.103	296	408	524	"	"		
" " " No. 2.	1	37/.083	80	314	526	"	"		
D.G. Supply	1	19/.064	91	143	100	"	"		
Section Panel 'G' Pantry Bridge Dk.	1	7/.054	68	80	60	"	"		
" " 'B' Bridge Deck	1	7/.052	50	60	30	"	"		
" " 'A' " "	1	7/.052	50	60	26	"	"		
" " 'H' Fridge Space	1	19/.052	65	110	180	"	"		
" " 'C' Upper Deck Aft	1	19/.052	95	110	120	"	"		
" " 'J' Laundry	1	19/.044	60	92	200	"	"		

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 or No. and Dia. of Strands, Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Navigation - main Supply	1	7/.036	5	28	140	V.C.	L.C.B.
do. - alt supply	1	7/.036	-	28	18	"	"
Radar Supply	1	7/.064	40	80	120	"	"
W/T. Supply	1	7/.064	25	80	100	"	"
Gyro Supply	1	7/.036	10	28	120	"	"
Forecastle DB,	1	7/.052	15	60	400	"	"
Mast Floods B-I, off 'B'	1	7/.036	10	28	140	"	"
Wheelhouse DB, A-I, off 'A'	1	7/.036	12	28	140	"	"
Upper Bridge Ltg. DB, A-2, off 'A'	1	7/.036	14	28	60	"	"
Bridge Ltg. DB, A-3, off 'A'	1	7/.036	12	28	80	"	"
" " " A-4, " "	1	7/.036	12	28	45	"	"
Upper Bridge DB, C-I, Port, off 'C'	1	7/.036	18	28	60	"	"
" " " C-2, Star, " "	1	7/.036	20	28	6	"	"
" " " C-3, Aft " "	1	7/.036	13	28	60	"	"
" " " C-4, Poop Star. " "	1	7/.036	18	28	18	"	"
" " " C-5, " Port. " "	1	7/.036	12	28	60	"	"
" " " C-6, Aft " "	1	7/.036	14	28	90	"	"
Eng. Rm. Ltg. DB, D-I, off Main Bd.	1	7/.044	20	42	80	"	"
" " " D-2, off 'D'	1	7/.044	20	42	160	"	"
" " " D-3, off 'D'	1	7/.044	20	42	70	"	"
Suez Canal Proj. (wiring only)	1	19/.044	-	92	450	"	"
Bridge Searchlight	1	7/.036	15	28	180	"	L.C.B.
Midships Toaster	1	7/.044	27	42	20	"	"
Aft ditto	1	7/.044	27	42	16	"	"
Laundry Boilers (2)	1	7/.036	15	28	40. 60	"	"
Pump Rm. Ltg. 'F'	1	7/.036	11	28	45	"	"

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.			
Steering Motors	2	15	1	19/.064	117	143	230	V.C.	L.C.A.B.
Valve Cooling Pumps	2	2	1	7/.036	18	28	2/62	"	"
F.W. Circ. Pump	1	1/2	1	7/.036	6	28	34	"	"
Oil Separators	6	3	1	7/.044	26	42	av. 20	"	"
Priming Pump	1	1.5	1	7/.036	15	28	60	"	"
F.W. Pumps	2	2 1/2	1	7/.036	22	28	2/70	"	"
Transfer Pump	1	4 1/2	1	7/.052	40	60	90	"	"
Sanitary & Fridge Pump	1	6	1	7/.052	50	60	60	"	"
Crane Motor	1	3	1	7/.036	26	28	30	"	"
Lathe Motor	1	2	1	7/.036	18	28	32	"	"
Driller Motor	1	1 1/2	1	7/.036	15	28	46	"	"
Grinder Motor	1	2	1	7/.036	18	28	32	"	"
S.W. Pumps	1	4	1	7/.052	35	60	60	"	"
Bilge Pumps	2	18	1	19/.083	145	202	2/190	"	"
General Service Pump	1	30	1	37/.072	227	260	180	"	"
Forced Lub Oil Pumps	2	16	1	19/.064	124	143	2/130	"	"
S.W. Circulating Pumps	2	40	1	37/.083	300	314	2/110	"	"
Jacket Water Pumps	2	40	1	37/.083	300	314	2/86	"	"
Turning Gear Motor	1	20	1	19/.083	155	202	222	"	"
Air Compressors	2	67	2	37/.072	505	520	2/88	"	"
Eng. Rm. Vent Fans	2	1 1/2	1	7/.036	15	28	2/70	"	"
Aft Thermotanks	2	3	1	7/.044	26	42	2/24	"	L.C.B.
Midship Ditto	1	4 1/2	1	7/.044	26	42	104	"	"
Mid Pantry Supply Fan	1	1/4	1	7/.029	6	15	100	V.I.R.	"
Fridge Compressor	1	6	1	7/.052	50	60	18	V.C.	L.C.A.B.
" Water Pump	1	1 1/2	1	7/.036	14	28	92	"	"
Washing M/c.	2	1	1	7/.029	10	15	2/24	V.I.R.	L.C.B.
Aft Exhaust Fan	1	1.2	1	7/.029	13	15	27	"	"
Aft Supply Fan	1	1/4	1	7/.036	7	24	28	"	"
Galley Blower	1	.6	1	7/.029	3	15	30	"	"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

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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.

PER F. J. Hunt Electrical Contractors. Date 31-5-52

COMPASSES.

Have the compasses been adjusted under working conditions yes

For and on behalf of
WILLIAM DOXFORD & SONS, LIMITED.

Builder's Signature.

Date

E. J. Hunt
Shipyard General Manager.

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

Is this installation a duplicate of a previous case yes If so, state name of vessel "Caltex Kenya"

Plans. Are approved plans forwarded herewith 'as fitted', yes If not, state date of approval SwBd. 15.10.51.D.24.4.52

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.)
The electrical equipment of this vessel has been installed under special survey in accordance with the approved plans and the special requirements of Section 15 of the Electrical Rules. 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 for "Carrying Petroleum in Bulk".

Particulars	Quantity	Unit	Value
1. 150 KVA Generator	2		£18.18.0
2. 50 KVA Generator	1		£15.14.0
3. 150 KVA Transformer	1		£15.14.0
4. 50 KVA Transformer	1		£15.14.0
5. 150 KVA Motor	1		£15.14.0
6. 50 KVA Motor	1		£15.14.0
7. 150 KVA Pump	1		£15.14.0
8. 50 KVA Pump	1		£15.14.0
9. 150 KVA Fan	1		£15.14.0
10. 50 KVA Fan	1		£15.14.0
11. 150 KVA Blower	1		£15.14.0
12. 50 KVA Blower	1		£15.14.0
13. 150 KVA Heater	1		£15.14.0
14. 50 KVA Heater	1		£15.14.0
15. 150 KVA Cooler	1		£15.14.0
16. 50 KVA Cooler	1		£15.14.0
17. 150 KVA Valve	1		£15.14.0
18. 50 KVA Valve	1		£15.14.0
19. 150 KVA Pipe	1		£15.14.0
20. 50 KVA Pipe	1		£15.14.0
21. 150 KVA Fitting	1		£15.14.0
22. 50 KVA Fitting	1		£15.14.0
23. 150 KVA Cable	1		£15.14.0
24. 50 KVA Cable	1		£15.14.0
25. 150 KVA Switch	1		£15.14.0
26. 50 KVA Switch	1		£15.14.0
27. 150 KVA Fuse	1		£15.14.0
28. 50 KVA Fuse	1		£15.14.0
29. 150 KVA Relay	1		£15.14.0
30. 50 KVA Relay	1		£15.14.0
31. 150 KVA Alarm	1		£15.14.0
32. 50 KVA Alarm	1		£15.14.0
33. 150 KVA Bell	1		£15.14.0
34. 50 KVA Bell	1		£15.14.0
35. 150 KVA Horn	1		£15.14.0
36. 50 KVA Horn	1		£15.14.0
37. 150 KVA Siren	1		£15.14.0
38. 50 KVA Siren	1		£15.14.0
39. 150 KVA Whistle	1		£15.14.0
40. 50 KVA Whistle	1		£15.14.0
41. 150 KVA Buzzer	1		£15.14.0
42. 50 KVA Buzzer	1		£15.14.0
43. 150 KVA Bell	1		£15.14.0
44. 50 KVA Bell	1		£15.14.0
45. 150 KVA Horn	1		£15.14.0
46. 50 KVA Horn	1		£15.14.0
47. 150 KVA Siren	1		£15.14.0
48. 50 KVA Siren	1		£15.14.0
49. 150 KVA Whistle	1		£15.14.0
50. 50 KVA Whistle	1		£15.14.0
51. 150 KVA Buzzer	1		£15.14.0
52. 50 KVA Buzzer	1		£15.14.0
53. 150 KVA Bell	1		£15.14.0
54. 50 KVA Bell	1		£15.14.0
55. 150 KVA Horn	1		£15.14.0
56. 50 KVA Horn	1		£15.14.0
57. 150 KVA Siren	1		£15.14.0
58. 50 KVA Siren	1		£15.14.0
59. 150 KVA Whistle	1		£15.14.0
60. 50 KVA Whistle	1		£15.14.0
61. 150 KVA Buzzer	1		£15.14.0
62. 50 KVA Buzzer	1		£15.14.0
63. 150 KVA Bell	1		£15.14.0
64. 50 KVA Bell	1		£15.14.0
65. 150 KVA Horn	1		£15.14.0
66. 50 KVA Horn	1		£15.14.0
67. 150 KVA Siren	1		£15.14.0
68. 50 KVA Siren	1		£15.14.0
69. 150 KVA Whistle	1		£15.14.0
70. 50 KVA Whistle	1		£15.14.0
71. 150 KVA Buzzer	1		£15.14.0
72. 50 KVA Buzzer	1		£15.14.0
73. 150 KVA Bell	1		£15.14.0
74. 50 KVA Bell	1		£15.14.0
75. 150 KVA Horn	1		£15.14.0
76. 50 KVA Horn	1		£15.14.0
77. 150 KVA Siren	1		£15.14.0
78. 50 KVA Siren	1		£15.14.0
79. 150 KVA Whistle	1		£15.14.0
80. 50 KVA Whistle	1		£15.14.0
81. 150 KVA Buzzer	1		£15.14.0
82. 50 KVA Buzzer	1		£15.14.0
83. 150 KVA Bell	1		£15.14.0
84. 50 KVA Bell	1		£15.14.0
85. 150 KVA Horn	1		£15.14.0
86. 50 KVA Horn	1		£15.14.0
87. 150 KVA Siren	1		£15.14.0
88. 50 KVA Siren	1		£15.14.0
89. 150 KVA Whistle	1		£15.14.0
90. 50 KVA Whistle	1		£15.14.0
91. 150 KVA Buzzer	1		£15.14.0
92. 50 KVA Buzzer	1		£15.14.0
93. 150 KVA Bell	1		£15.14.0
94. 50 KVA Bell	1		£15.14.0
95. 150 KVA Horn	1		£15.14.0
96. 50 KVA Horn	1		£15.14.0
97. 150 KVA Siren	1		£15.14.0
98. 50 KVA Siren	1		£15.14.0
99. 150 KVA Whistle	1		£15.14.0
100. 50 KVA Whistle	1		£15.14.0

Total Capacity of Generators (2 x 150, 1 x 50) 350 Kilowatts.

The amount of Fee £18.18.0

When applied for,
JUN 13 1952

When received,

Travelling Expenses (if any) £

19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 8 JUL 1952

Assigned S. F. E. mch. rpt.