

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 22 OCT 1946

Date of writing Report 23 Sept. 1946 When handed in at Local Office 21 Oct. 1946 Port of BELFAST

No. in Survey held at Belfast Date, First Survey 18 Jan Last Survey 27 Sept 1946
Reg. Book. (Number of Visits 25)

69167 on the SS "BALAENA" Tons { Gross 15.760
Net 8.223

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 1327 When built 1945-46

Owners United Whalers Ltd. Port belonging to London

Electrical Installation fitted by Harland & Wolff Ltd. Contract No. 1327 When fitted 1946

Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Two Wire Voltage of supply for Lighting 220

Heating 220 Power 220 Direct or Alternating Current, Lighting Direct Power Direct If Alternating Current state periodicity — Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off No Are turbine emergency governors fitted with a

trip switch as per Rule Yes Generators, are they compound wound Yes, are they level compounded under working conditions Yes

if not compound wound state distance between generators — and from switchboard — Where more than one generator is fitted are they

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 Yes Have certificates of

test for machines under 100 kw. been supplied No and the results found as per rules No Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators Main Engine Room Forward

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated

near unprotected combustible material state distance from same horizontally — and vertically — are the generators protected from mechanical

injury and damage from water, steam and oil Yes are the bedplates and frames earthed Yes and the prime movers and generators in metallic

contact Yes Switchboards, where are main switchboards placed Main Engine Room Forward

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil Yes, if situated near unprotected combustible material state distance from same horizontally — and vertically —, what insulation

material is used for the panels Bindany, 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 frame effectually earthed Yes

Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

to pilot and earth lamps, voltmeters, etc. Yes, locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches 75 K.W. Steam Generator

400 Amp. Hand Operated Circuit - Breaker, T.P., Centre Pole Equal. 2, Overload & Reverse Current on + VE.

300 K.W. Diesel Generators - 1500 Amp. Hand Oper. & Circuit - Breaker, T.P. Centre Pole Equal. 2, 0/L, SH. Trip Aux. SW. Reverse

Current on + VE. 1500 K.W. Turbo Generator - 7000 Amp. Elect. Oper. & Circuit - Breaker, T.P.

Centre Pole Equal. 2, 0/L, SH. Trip Aux. SW. Operating Switch

and for each outgoing circuit Over 300 Amps - Hand Operated Circuit - Breaker D.P. 0/L with Time Lag

Under 300 Amps - D.P. Quick Break Knife Switch with Fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 24

ammeters 3 voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection Yes Earth Testing, state means provided 2 Lamp System with D.P. Switch & Fuses.

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as

per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested 50%, are the reversed current

protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

did they operate 20 Amps 120 Amps Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules 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 12.5 Volts are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes

with insulating compound — or waterproof insulating tape 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 cables laid under machines or floorplates. Yes, if so, are they adequately protected. Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. — State how the cables are supported and protected. Lead covered Cable clipped to Perforated Rating Bulkheads in Accommodation etc. on Bulk Plate in Factory Decks and in Galvanised Iron Pipes to Winches.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. 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 and with what material. Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes. Emergency Supply, state position. — and method of control. —

Navigation Lamps, are they separately wired. Yes controlled by separate double pole switches. Yes 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. Secondary Batteries, are they constructed and fitted as per Rule. Yes, are they adequately ventilated. Yes what is the battery capacity in ampere hours. 61 Ampere Hours at 10 Hour Rate.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes. Are 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. Gaslight Fittings in Lamp Room, Paint Room & Magazines, Working in Conduit and where are the controlling switches fitted. Outside Compartments, are all fittings suitably ventilated. Yes are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of —, whether fixed or portable. — are their fittings as per Rule. — 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. Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. Yes, if situated near unprotected combustible material state minimum distance from same horizontally. — and vertically. — Are motors coupled to oil fuel transfer and unit 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 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. —, are all fuses of the cartridge type. — Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. — Are the cables lead covered as per Rule. — Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. Yes, are they suitably stored in dry situations. Yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. Yes See Remarks.

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	1	75	220	341	500	Steam Engine		
	2	300	220	1364	410	6 Cylinder Diesel Engine	oil	above 150°F.
	1	1500	220	6820	550	Steam Turbine		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet).	INSULATED WITH.	HOW PROTECTED.
		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	75	1	37/103	341	385	120	V.C.	Lead Covered
" " EQUALISER		1	19/083	—	191	60	V.C.	Lead Covered
" " No. 2 & No. 3 (each)	300	2	91/103	1364	1476	150	V.C.	Lead Covered
" " Equaliser		1	91/103	—	738	75	V.C.	Lead Covered
" " No. 4	1500	6	*109. inch	6820	7080	—	Brass or Insulation	Sheet Steel Case
" " Equaliser		3	*109. inch	—	3680	—	Brass or Insulation	Sheet Steel Case
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

* 4"x1/4" Copper Bar

Rpt. 9a.

Port of

Continuation of Report No. 14271 dated 21/10/46.

on the

Main Distribution Cables (Contd.)								
Description	No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands sq. ins. or sq. mm.	Maximum Current in the Circuit	Rule	Approx. Length (feet plus return feet)	Insulated with	How protected.	
Section Box No. 5/IA Ventilation	1	19/052	96	104	135	V.C.	Lead covered.	
Section Box No. 12/IA Domestic	1	7/044	13	31	75	V.I.R.	"	
Section Box No. 13/IA Domestic	1	7/044	14	31	120	V.I.R.	"	
Section Box No. 24/IIA Laundry	1	7/044	25	31	120	V.I.R.	"	
Section Box No. 25/IIA Ventilation	1	7/044	10	31	90	V.I.R.	"	
Section Box No. 25 ^A /IIA/C L ^{TS} etc.	1	19/052	35	104	75	V.C.	"	
Section Box No. 26/IIA Ventilation	1	19/052	77	104	195	V.C.	"	
Section Box No. 28/IB Workshop	1	7/064	48	75	145	V.C.	"	
Section Box No. 29/IB Workshop	1	7/064	36	75	180	V.C.	"	
Section Box No. 30/IC Workshop	1	7/064	28	75	210	V.C.	"	
Section Box No. 32/II D Ventilation	1	19/083	134	191	200	V.C.	"	
Section Box No. 36/IC Ventilation	1	19/083	129	191	210	V.C.	"	
Section Box No. 38 ^A /IB Workshop	1	7/064	30	46	330	V.I.R.	"	
Section Box No. 39/IC Buell Dryers	1	7/064	29	75	165	V.C.	"	
Section Box No. 40/IC Factory	1	19/052	26	104	160	V.C.	"	
Section Box No. 41/IC Factory	1	19/052	21	104	225	V.C.	"	
Section Box No. 42/ID Buell Dryers	1	7/064	34	75	240	V.C.	"	
Section Box No. 43/IC Factory	1	19/052	38	104	120	V.C.	"	
Section Box No. 44/IC Factory	1	19/052	29	104	180	V.C.	"	
Section Box No. 45/IV Bookers	1	19/052	16	104	135	V.C.	"	
Section Box No. 46/IV D Factory	1	19/052	65	104	150	V.C.	"	
Section Box No. 49/IV D Factory	1	19/052	65	104	240	V.C.	"	
Section Box No. 50/IC Liver Plant	1	19/052	59	104	120	V.C.	"	
Section Box No. 53/IB Factory	1	19/083	92	191	150	V.C.	"	
Section Box No. 55/IB Separator	1	37/072	142	246	165	V.C.	"	
Section Box No. 56/IB Plant	1	19/083	81	191	180	V.C.	"	
Section Box No. 56 ^A /IC Oil Pumps	1	19/052	66	104	160	V.C.	"	
Section Box No. 56 ^B /IC Plant	1	19/052	69	104	180	V.C.	"	
Section Box No. 59/VII Small Motors	1	7/064	36	46	195	V.I.R.	"	
Section Box No. 60/VIIA Ventilation	1	19/064	109	135	255	V.C.	"	

Lighting and Heating etc. cables (Contd.)

Dist. Box No. 16/IB Lighting	1	7/044	14	31	120	V.I.R.	Lead covered	
Dist. Box No. 17/IB Lighting	1	7/044	18	31	105	V.I.R.	"	
Dist. Box No. 18/II B Lighting	1	7/036	10	24	600	V.I.R.	"	
Dist. Box No. 19/II B Lighting	1	7/036	10	24	540	V.I.R.	"	
Dist. Box No. 20/II B Lighting	1	7/036	14	24	120	V.I.R.	"	
Dist. Box No. 21/II B Lighting	1	7/036	14	24	135	V.I.R.	"	
A.P. Box No. 21 ^A /IIA Laboratory	1	7/064	23	75	75	V.C.	"	
A.P. Box No. 21 ^B /IIA Laboratory	1	7/064	32	75	85	V.C.	"	
Dist. Box No. 22/II B Lighting	1	7/036	12	24	150	V.I.R.	"	
Dist. Box No. 23/II B Lighting	1	7/036	12	24	165	V.I.R.	"	
S. & F. Box No. 27/IB Lighting	1	7/044	15	31	195	V.I.R.	"	

Lighting and Heating etc. cables. (contd.)

Description	Conductors		Maximum Current		Approx. Length Lead plus Return feet	Insulated with	How protected
	No. in Parallel per Pole	Sectional Area or No. & dia. of Strands sq. ins. or sq. mm.	in Amperes	Rule			
S. & F. Box N° 28 ^a /IV E. Floodlighting	1	7/.044	22	31 ✓	435	V.I.R.	Lead Covered.
S. & F. Box N° 29 ^a /V D. Floodlighting	1	7/.044	18	31 ✓	180	V.I.R.	" "
S. & F. Box N° 31/IV E. Factory Lighting	1	7/.036	18	24 ✓	120	V.I.R.	" "
S. & F. Box N° 33/IV E. Factory Lighting	1	7/.036	14	24 ✓	150	V.I.R.	" "
S. & F. Box N° 34/V D. Factory Lighting	1	7/.064	33	46 ✓	120	V.I.R.	" "
Disk. Box N° 35/V D. Factory Lighting	1	7/.044	12	31 ✓	150	V.I.R.	" "
Disk. Box N° 36 ^a /VB. Laboratory	1	19/.052	68	104 ✓	120	V.C.	" "
Disk. Box N° 36 ^b /VB. Laboratory	1	19/.052	68	104 ✓	120	V.C.	" "
S. & F. Box N° 37/V D. Factory Lighting	1	7/.064	33	46 ✓	150	V.I.R.	" "
S. & F. Box N° 38/V D. Factory Lighting	1	7/.044	20	31 ✓	150	V.I.R.	" "
S. & F. Box N° 47/IV E. Factory Lighting	1	7/.036	17	24 ✓	120	V.I.R.	" "
S. & F. Box N° 48/IV E. Factory Lighting	1	7/.036	17	24 ✓	150	V.I.R.	" "
S. & F. Box N° 51/V D. Factory Lighting	1	7/.044	17	31 ✓	120	V.I.R.	" "
Disk. Box N° 52/V D. Factory Lighting	1	7/.044	12	31 ✓	150	V.I.R.	" "
Disk. Box N° 53 ^a /VB. Lanning Plant.	1	7/.036	12	24 ✓	120	V.I.R.	" "
S. & F. Box N° 54/V D. Factory Lighting	1	7/.044	17	31 ✓	150	V.I.R.	" "
S. & F. Box N° 57/VII B.E.R. Lighting	1	7/.036	23	24 ✓	90	V.I.R.	" "
S. & F. Box N° 58/VII B.E.R. Lighting	1	7/.036	21	24 ✓	105	V.I.R.	" "
S. & F. Box N° 58 ^a /VIII B.E.R. Lighting	1	7/.044	29	31 ✓	120	V.I.R.	" "

Motor Cables (contd.)

All Important Motors to be Enumerated.	N°	B.H.P.						
Welding Motor Generator	1	15.0	1	19/.052	60.0	104 ✓	810	V.C. Lead Covered
Power Hammer	1	8.0	1	7/.064	33.5	46 ✓	150	V.I.R. " "
Bucular Saw.	1	5.0	1	7/.036	21.2	24 ✓	75	V.I.R. " "
Planing Machine	1	4.0	1	7/.036	16.4	24 ✓	90	V.I.R. " "
Band Saw	1	4.0	1	7/.036	16.4	24 ✓	75	V.I.R. " "
8 1/2" Lathe	1	3.0	1	7/.036	12.8	24	75	V.I.R. " "
Emergy Grinder	1	3.0	1	7/.036	12.7	24 ✓	30	V.I.R. " "
Emergy Grinder	2	1.5	1	3/.036	6.8	10 ✓	42	V.I.R. " "
Screw Cutting Machine	1	3.0	1	7/.036	12.8	24 ✓	30	V.I.R. " "
Grindstones	2	3.0	1	7/.036	12.8	24 ✓	36	V.I.R. " "
Hack Saw	1	2.0	1	3/.036	8.8	10 ✓	75	V.I.R. " "
Vertical Drill	1	1.5	1	3/.036	7.0	10 ✓	30	V.I.R. " "
Compressor Flowmeters	1	1.75	1	3/.036	8.0	10 ✓	60	V.I.R. " "
Saw Sharpener	1	1.0	1	3/.029	4.8	5 ✓	45	V.I.R. " "
Paint Mixer	1	1.0	1	3/.036	4.8	10 ✓	30	V.I.R. " "
Portable Drilling M/c	1	1.0	1	3/.036	5.0	10 ✓	60	V.I.R. " "
Blowers	2	0.375	1	3/.029	2.0	5 ✓	60	V.I.R. " "
Shaping Machine	1	2.0	1	3/.036	8.9	10	30	V.I.R. " "
Thermotank Fans	4	4.0	1	7/.036	17.0	24 ✓	150	V.I.R. " "
Thermotank Fans	4	3.25	1	7/.036	14.5	24 ✓	120	V.I.R. " "
Thermotank Fans	4	0.5	1	3/.029	2.4	5 ✓	150	V.I.R. " "

Motor tables (contd.)

All Important Motors to be Enumerated	Nº	B.H.P.	Conductors		Maximum Current in Amperes		Approx. Length of Lead (ft.)	Insulated with	How Protected
			Nº in Parallel per Pole	Sectional Area of Strands sq. ins. or sq. mm.	for the Circuit	Rule			
Fan Heaters	2	1.5	1	3/.036	6.7	10✓	75	V.I.R.	Lead covered
Fan Heater	1	0.75	1	3/.029	3.8	5✓	60	V.I.R.	" "
Fan Heater	1	0.45	1	3/.029	2.7	5✓	45	V.I.R.	" "
Fan Heater	1	-	1	3/.029	1.28	5✓	60	V.I.R.	" "
22½" dia. Exhaust Fan	1	5.0	1	7/.036	20.0	24✓	90	V.I.R.	" "
17½" dia. Supply Fan	1	3.25	1	7/.036	14.5	24✓	90	V.I.R.	" "
17½" dia. Exhaust Fan	1	3.25	1	7/.036	14.5	24✓	75	V.I.R.	" "
17½" dia. Supply Fans	2	3.0	1	7/.036	13.0	24✓	90	V.I.R.	" "
17½" dia. Supply Fan	1	0.875	1	3/.029	4.0	5✓	60	V.I.R.	" "
17½" dia. Exhaust Fan	1	0.875	1	3/.029	4.0	5✓	60	V.I.R.	" "
20" dia. Exhaust Fans	2	1.5	1	3/.036	7.25	10✓	150	V.I.R.	" "
12½" dia. Portable Supply Fan	1	1.45/1.65	1	3/.036	7.4	10✓	120	V.I.R.	" "
10" dia. Exhaust Fan	1	1.0	1	3/.036	4.6	10✓	60	V.I.R.	" "
5" dia. Exhaust Fans	2	-	1	3/.036	2.7	10✓	60	V.I.R.	" "
5" dia. Exhaust Fans	3	1.8	1	3/.029	1.0	5✓	75	V.I.R.	" "
35" dia. Torpedo Fans	8	5.0	1	7/.036	20.5	24✓	120	V.I.R.	" "
25" dia. Torpedo Fans	4	2.75	1	7/.036	12.0	24✓	150	V.I.R.	" "
32½" dia. Aero Fans	4	5.0	1	7/.036	21.0	24✓	150	V.I.R.	" "
27½" dia. Aero Fans	2	2.5	1	7/.036	11.3	24✓	120	V.I.R.	" "
Rose Down Expellers	6	60.0	1	37/.072	238.0	246✓	150	V.C.	" "
Grinders	2	50.0	1	37/.072	192.0	246✓	180	V.C.	" "
Hoggers	4	40.0	1	19/.083	154.0	191✓	300	V.C.	" "
Mincers	4	40.0	1	19/.083	154.0	191✓	180	V.C.	" "
Mincers	2	15.0	1	7/.064	59.0	75✓	120	V.C.	" "
Kvaerner Digesters	6	25.0	1	19/.052	100.0	104✓	150	V.C.	" "
Hartman Digesters	2	25.0	1	19/.052	100.0	104✓	180	V.C.	" "
Sludge Pump	1	25.0	1	19/.052	97.0	104✓	180	V.C.	" "
Sludge Pump	1	9.0	1	7/.064	36.0	46✓	210	V.I.R.	" "
Air Compressor	1	24.0	1	19/.052	92.5	104✓	150	V.C.	" "
Hoists	2	20.0	1	19/.052	78.0	104✓	120	V.C.	" "
Water Extraction Pump	1	17.0	1	7/.064	66.0	75✓	300	V.C.	" "
Extractor Motors	6	35.0	1	19/.083	136.0	191✓	210	V.C.	" "
Blubber Boiler	1	16.0	1	7/.064	66.0	75✓	150	V.C.	" "
Fraser Flask Evaporator	1	14.0	1	7/.064	56.0	75✓	120	V.C.	" "
Dry Air Pump	1	10.0	1	7/.064	40.0	46✓	150	V.I.R.	" "
G.V.K.5. Separator	1	12.0	1	7/.064	48.0	75✓	120	V.C.	" "
G.V.K.5. Separators	8	8.0	1	7/.064	33.5	46✓	180	V.I.R.	" "
Kvaerner Separator	1	8.0	1	7/.064	35.0	46✓	270	V.I.R.	" "
Kvaerner Separator	7	4.0	1	7/.036	17.0	24✓	180	V.I.R.	" "
Meat Cutter	1	8.0	1	7/.064	33.5	46✓	120	V.I.R.	" "
Vibrating Screens	6	1.7	1	3/.036	7.7	10✓	60	V.I.R.	" "
Buell Dryer Rotor	4	15.0	1	7.064	60.0	75✓	150	V.C.	" "
Buell Dryer Fan	4	8.5	1	7/.064	36.4	46✓	150	V.I.R.	" "

Motor Cables (Contd.)

All Important Motors to be Enumerated.	No	B.H.P.	Conductors		Maximum Current in Amperes		Grounding (Lead per 1000 feet)	Insulated with	How Protected.
			No. in Parallel per Pole	Sectional Area sq. ins. or mm ²	In Circuit	Rule			
Pre-Heater Rotors.	2	7.5	1	7/.064	30.0	46	135	V.I.R.	Lead covered
Fault Rotors.	2	10.0	1	7/.064	40.0	46	150	V.I.R.	" "
Buell Bone Drive.	1	8.0	1	7/.064	35.0	46	160	V.I.R.	" "
Bone Crusher	1	8.0	1	7/.064	35.0	46	120	V.I.R.	" "
Buell Bone Dyer Fan.	1	5.0	1	7/.036	20.0	24	150	V.I.R.	" "
Buell Bone Air Fan.	1	1.0	1	3/.036	4.5	10	150	V.I.R.	" "
Purifiers.	8	6.0	1	7/.044	25.4	31	60	V.I.R.	" "
Concentrator.	1	6.0	1	7/.044	25.4	31	150	V.I.R.	" "
Concentrators.	4	6.0	1	7/.044	25.4	31	120	V.I.R.	" "
Meat Extract Machines	3	5.0	1	7/.036	20.0	24	135	V.I.R.	" "
Oil Pump.	1	1.0	1	3/.036	4.6	10	45	V.I.R.	" "
Canning Plant Motor.	1	1.5	1	3/.036	6.2	10	50	V.I.R.	" "
Canning Plant Motors.	2	1.0	1	3/.036	4.7	10	36	V.I.R.	" "
Dirty Whale Oil Pumps.	4	5.0	1	7/.036	21.2	24	75	V.I.R.	" "
Clean Whale Oil Pumps.	3	5.0	1	7/.036	21.2	24	75	V.I.R.	" "
Disc Brushing Machines	3	0.4	1	3/.029	1.9	5	60	V.I.R.	" "
Screw Press Liqueur Pumps	3	2.0	1	3/.036	8.8	10	75	V.I.R.	" "
Fault Liqueur Pump	1	5.0	1	7/.036	21.2	24	90	V.I.R.	" "
Vacuum Pump 12"x9"	1	4.0	1	7/.036	17.0	24	75	V.I.R.	" "
Vacuum Pump 6"x6"	1	1.0	1	3/.029	4.6	5	80	V.I.R.	" "
Feed Pump.	1	4.0	1	7/.036	17.0	24	75	V.I.R.	" "
Magnetic Separator.	2	1.0	1	3/.036	4.6	10	50	V.I.R.	" "
Fault Feeds.	2	1.0	1	3/.036	4.6	10	90	V.I.R.	" "
Oil Burning Motors.	4	1.5	1	3/.036	6.4	10	60	V.I.R.	" "
Turntables.	4	3.0	1	7/.036	13.8	24	75	V.I.R.	" "
Oil Heating Circulating Pump	2	1.5	1	3/.036	6.4	10	90	V.I.R.	" "
Bagging Machines.	2	2.0	1	3/.036	8.8	10	90	V.I.R.	" "
Elevators.	2	8.0	1	7/.064	35.0	46	90	V.I.R.	" "
Elevators.	2	6.0	1	7/.044	25.4	31	120	V.I.R.	" "
Elevators.	4	3.0	1	7/.036	13.2	24	75	V.I.R.	" "
Conveyors.	6	5.0	1	7/.036	21.2	24	90	V.I.R.	" "
Conveyors.	8	3.0	1	7/.036	13.2	24	90	V.I.R.	" "
Mixed Liqueur Conveyor	1	2.0	1	3/.036	8.8	10	75	V.I.R.	" "
Discharge Conveyors	2	4.0	1	7/.036	17.0	24	75	V.I.R.	" "
Meal Conveyor	1	5.0	1	7/.036	21.2	24	120	V.I.R.	" "
Mono Pump.	1	2.25	1	3/.036	10.0	10	150	V.I.R.	" "
Mono Pump.	1	0.75	1	3/.036	3.6	10	150	V.I.R.	" "
Morris Hoists.	2	1.0	1	3/.036	5.0	10	60	V.I.R.	" "
Bollard Hoists.	3	6.0	1	7/.036	23.0	24	75	V.I.R.	" "
Gyro Compass Motor - Gen.	1	-	1	7/.036	10	24	30	V.I.R.	" "

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
Masterboard I Section A	1	37/072	242	246	900	V.C.	Lead covered
Masterboard I Section B	1	91/093	161	62.4	900	V.C.	Lead covered
Masterboard II	2	91/103	1393	1476	800	V.C.	Lead covered
Masterboard III	2	61/103	855	1080	780	V.C.	Lead covered
Masterboard IV Section A	1	127/103	777	932	720	V.C.	Lead covered
Masterboard IV Section B	1	127/103	756	932	700	V.C.	Lead covered
Masterboard IV Section C	2	61/103	881	1080	720	V.C.	Lead covered
Masterboard III Section D	1	91/103	693	738	720	V.C.	Lead covered.
Masterboards IV & V Sections E & D	1	19/083	171	191	720	V.C.	Lead covered
Masterboard VI Section A	1	61/093	428	464	420	V.C.	Lead covered
Masterboard VI Section B	1	127/103	925	932	720	V.C.	Lead covered.
Masterboard VI Section C	1	127/103	928	932	700	V.C.	Lead covered.
Masterboard VII Section A	1	61/093	471	464	330	V.C.	Lead covered.
Masterboard VII Section B	1	19/083	102	104	330	V.C.	Lead covered.
Masterboard VIII Section A	1	37/072	203	246	150	V.C.	Lead covered.
Masterboard VIII Section B	1	7/064	73	75	150	V.C.	Lead covered.

LIGHTING AND HEATING, ETC., CABLES.

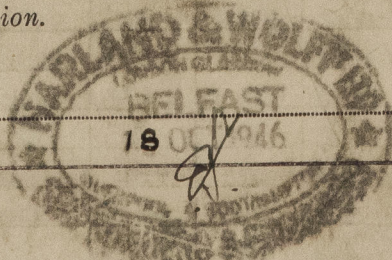
WIRELESS ...	1	7/044	20	31	150	V.I.R.	Lead covered
NAVIGATION LIGHTS S. & F. Box No. 1 ...	1	7/044	20	31	270	V.I.R.	" "
LIGHTING AND HEATING ...							
S & F Box No. 2/I.B. Boat & Deck Lighting	1	19/052	20	104	275	V.C.	" "
Dist. Box No. 3/I.B. Lighting	1	7/044	15	31	255	V.I.R.	" "
Dist. Box No. 4/I.B. Lighting	1	7/044	15	31	240	V.I.R.	" "
Dist. Box No. 6/I.B. Lighting	1	7/044	16	31	90	V.I.R.	" "
Dist. Box No. 7/VI.B. Lighting	1	7/036	11	24	105	V.I.R.	" "
Dist. Box No. 8/VI.B. Lighting	1	7/036	20	24	60	V.I.R.	" "
Dist. Box No. 8 ¹ /VI.B. Lighting	1	7/036	20	24	66	V.I.R.	" "
A.P. Box No. 8 ² /VI.B. Hospital	1	7/044	17	31	71	V.I.R.	" "
A.P. Box No. 8 ² /VI.B. Hospital	1	7/064	20	75	80	V.C.	" "
Dist. Box No. 9/I.B. Lighting	1	7/044	15	31	150	V.I.R.	" "
Dist. Box No. 10/I.B. Lighting	1	7/044	14	31	105	V.I.R.	" "
Dist. Box No. 11/I.B. Lighting	1	7/044	18	31	75	V.I.R.	" "
Dist. Box No. 14/VI.B. Lighting	1	7/036	14	24	135	V.I.R.	" "
Dist. Box No. 15/VI.B. Lighting	1	7/036	14	24	90	V.I.R.	" "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
5 Ton Winches.	5	57.0	1	37/072	222.0	246	240	V.C. Lead covered
3 Ton Winches	4	38.0	1	19/083	150.0	191	300	V.C. " "
Boat Winches	8	12.5	1	7/064	51.5	75	270	V.C. " "
Hoist Motor, Aircraft Crane	1	55.0	1		204.0			
Luffing Motor, Aircraft Crane	1	20.0	1		78.0			
Aux. Luffing Motor, Aircraft Crane	1	25.0	1	37/093	95.5	343	150	V.C. " "
Blowing Motor, Aircraft Crane	1	3.0	1		13.0			
Ticing Winch Motor, Aircraft Crane	1	6/18.0	1		77.5			
Creeper Hoist, Aircraft Crane	1	2.0	1		9.7			
Catapult Oil Pump Motor	1	28.5	1	19/083	108.0	191	150	V.C. " "
C.O ₂ Compressors.	2	130.0	1	61/103	464.0	540	150	V.C. " "
Brine Pumps	2	27.5	1	19/064	109.0	135	90	V.C. " "
Brine Pumps	2	8.0	1	7/064	34.5	46	90	V.I.R. " "
Air Compressor	1	27.5	1	19/064	109.0	135	240	V.C. " "
Vacuum Pump	1	8.0	1	7/064	34.5	46	75	V.I.R. " "
S.W. Circulating Pump (Refrig)	2	7.0	1	7/044	29.3	31	900	V.I.R. " "
F.W. Circulating Pump (Refrig)	1	2.0	1	3/036	8.8	10	75	V.I.R. " "
300 L.B. Air Compressor E.R.	1	11.0	1	7/036	44.0	46	240	V.I.R. " "
S.W. Circulating Pump E.R.	1	4.75	1	7/036	20.0	24	210	V.I.R. " "
Oil Purifiers E.R.	2	1.25	1	3/036	6.1	10	75	V.I.R. " "
Steam Raising Apparatus E.R.	1	0.75	1	7/036	4.15	24	210	V.I.R. " "
Oil Vapour Extraction Fan E.R.	1	0.5	1	3/029	2.6	5	75	V.I.R. " "
8" Lathe E.R. Workshop	1	3.0	1	7/036	13.0	24	60	V.I.R. " "
Shaping Machine E.R. Workshop	1	2.0	1	3/036	8.9	10	75	V.I.R. " "
Double Emery Wheel E.R. W. Shop	1	1.5	1	3/036	6.8	10	75	V.I.R. " "
20" Vertical Drill E.R. W. Shop	1	1.5	1	3/036	7.0	10	75	V.I.R. " "
Washing Machine	1	1.0	1	3/036	4.7	10	75	V.I.R. " "
Hydro Extractor	1	3.0	1	7/036	12.4	24	60	V.I.R. " "
Mangle Motor	1	0.75	1	3/029	3.6	5	75	V.I.R. " "

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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.



Electrical Engineers. Date.....

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... 15 feet.

Minimum distance between electric generators or motors and steering compass..... 20 feet.

The nearest cables to the compasses are as follows:—

A cable carrying 12 Ampères 0 N feet from standard compass 12 feet from steering compass.

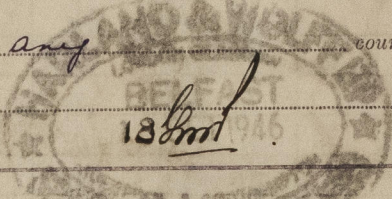
A cable carrying 12 Ampères 12 feet from standard compass 0 N feet from steering compass.

A cable carrying 20 Ampères 15 feet from standard compass 12 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 no degrees on any course in the case of the standard compass, and no degrees on any course in the case of the steering compass.



Builder's Signature. Date 15. 10. 46.

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

Plans. Are approved plans forwarded herewith no If not, state date of approval 11-12-45

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith *see remarks*

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) *When the vessel left this port work was not completed on the factory equipment and tests were not completed on the 1500 Kw. turbo-generator set. The vessel was to spend a few days in Norway. The Oslo Surveyors were informed and requested to witness tests on the 1500 Kw generator, and to examine the factory electrical equipment on completion and witness insulation tests on factory circuits. Report 76 for the works test on the 1500 Kw generator was forwarded to the Oslo Surveyors.*

The following makes test certificates are outstanding. The Builder state they will forward them as soon as they are received. 75 Kw generator, 11HP air compressor, 4.75 Pw air pump, 2-8HP. Brine pump motor, 2-7HP. air pump motor, 8HP. Vacuum pump motor

Except as stated above the electrical equipment of this vessel has been fitted on board under special survey, tested under working conditions and found satisfactory. Workmanship and materials are good.

Notes Rem 11. 11. 46

Total Capacity of Generators 2175 ✓ Kilowatts.

The amount of Fees Belfast £91-10-0 } 114:7-6:
London £22-17-6

LONDON Travelling Expenses (if any) £ 4 3-1 :

When applied for,

..... 19

When received,

..... 19

R. J. Macchison

Surveyor to Lloyd's Register of Shipping.

FRI. 22 NOV 1946

Committee's Minute

Assigned *See F.E. nucky rpt*

5m. 100. 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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Lloyd's Register
Foundation