

PERIODIC MAINTENANCE ACTION - USD_oE ARMS SITES

ELECTROLYSER ARCS2

Location: Nauru

Date: 11-Jul-04

Check Performed	H'Book Reference	Requirement	Action
Gas Analyser			
1 Battery condition of analyser	Section 4.1 (Teledyne)	Between 6 - 8 on the 25% scale	OK
2 Calibration against air of gas analyser	Section 3.4.1 (Teledyne)	20.80%	Corrected up
3 Aspirator filter condition		Moisten, replace when guggy	OK
4 Electrolyser hydrogen gas sample reading		Less than 1 %	0.02
Electrical Cabinet Pressurisation System			
5 Wind sail switch operation	Section 8G(b) (Electrolyser Corp)		OK
6 Purge time delay relay operation	Section 7B(ii) (Electrolyser Corp)	Greater than 60 seconds	61
7 Air vent holes, rear of electrical cabinet unobstructed			CLEAR
8 Exterior air intake vent unobstructed			Cleaned
9 Lubrication of pressurising fan		4 drops of oil per lubricating point	N/A ARCS2
10 Air filter		Clean and replace as necessary	Cleaned
Control Systems			
11 High pressure cut-off switch	Section 8G(a) (Electrolyser Corp)	100 ± 3 psi	100
12 Compressor start switch (ZSH6)	Section 7D(iii) (Electrolyser Corp)		OK

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13 Compressor stop switch (ZSL6)	Section 7B(iii) (Electrolyser Corp)		OK
14 Compressor stop switch (ZSLL6)	Section 7B(iii) (Electrolyser Corp)		OK
15 Operating current	Section 7B (Electrolyser Corp)	250 amps	250
16 Idle current	Section 7B (Electrolyser Corp)	30 amps	30

Water System

17 Demineralizing cartridge colour	Section 8F (Electrolyser Corp)	Change if showing colour change (black > brown)	No Change required
18 Deionising resin		Change if above test shows a colour change	No change required
19 Water seal	MEI 4.4001	Clean	CLEANED
20 Water seal overflow pipe height	MEI 4.4001 par 18	280mm	Set at 280mm
21 Water tubing - 1/4" dia		Check condition for deterioration and replace as necessary	OK

Electrolytic Cells

22 Cell condition			Good
23 Vent tube condition			Good
24 Electrolyte leaks			NIL
25 Oxygen contamination check of each cell	Cell 1	Less than 1%	0.03
	Cell 2		0.04
	Cell 3		0.02
	Cell 4		0.03

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	Cell5		0.04
26 Specific gravity of each cell	Cell 1		before 1270 after 1300
	Cell 2		1295
	Cell 3	Greater than 1270	before 1280 after 1300
	Cell 4		before 1260 after 1285
	Cell 5		1300
27 Hydrogen vent pipe exit		Check for obstructions and remove	Clear
28 Oxygen vent pipe exit		Check for obstructions and remove	Clear
Compressor			
29 Compressor		Complete overhaul every maintenance visit	Overhauled
30 Compressor valve plate		Complete overhaul every maintenance visit	Overhauled
31 Coalescing filter		Change every maintenance visit	Changed
32 Compressor oil		Change every maintenance visit	Changed
33 Pumpdown test		Valve V1 in vent position	57 sec @75psi
Moisture			
34 Storage cylinder moisture vented		Every maintenance visit	150 ml
General			
35		Cleaning of electrolyser	Cleaned
36		Cleaning of 'H' van	Observers

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Leak Tests

37 Low pressure leak test between cells and gasholder	No greater than 2.5cms indicated by inlet manometer	OK
38 Low pressure leak between gasholder and compressor inlet valve	No greater than 2.5cms indicated by gasholder position	OK

Manometer

39 Inlet manometer fluid level	Level not less than + 1.0cms	OK
40 Outlet manometer fluid level	Level not less than + 1.0cms	OK
39 Gas tubes - 3/8" dia	Check condition for deterioration	Good
41 Manometer tube exits	Check that they are not obstructed	Clear

Safety

42 Safety signs prominently displayed		Faded
43 Drench shower operates satisfactorily (water, temperature, pressure etc)		OK
44 KOH neutralising fluid	Sufficient acetic acid available	OK

REMOTE BALLOON LAUNCHER

Visual Inspection

1 Operation of sliding door		OK
2 Operation of door catch (inside/outside)		OK

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3 Tension of rubber curtains	OK
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4 Gas hose condition	Good
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5 Earth system condition	Good
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Safety

6 Safety signs prominently displayed	OK
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Remote Launch Mechanism Enclosure

7 Water sprays operate satisfactorily	OK
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8 Light in enclosure illuminates	OK
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9 Flashing light and audible alarm operates satisfactorily	OK
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10 Blower fan operates satisfactorily	OK
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11 Balloon release mechanism and cable not obstructed and operates satisfactorily	OK
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Leak Tests

12 Balloon fill valve	RBL Technical Manual part 7 section 5.1	Determine increase in pressure after 60 minutes	Nil increase
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13 Hydrogen pipeline and fittings	RBL Technical Manual part 7 section 5.3	Check pipes and fittings after opening balloon fill valve for 20 seconds	Nil Leaks
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Regulator

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14 Regulator gas flow rate	RBL Technical Manual part 7 section 5.2	100kPa	adjusted from 110 to 101 kPa
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Earthing System

15 Electrical supply earth resistance	RBL Technical Manual part 7 section 5.4		OK
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16 Lightning earth resistance	RBL Technical Manual part 7 section 5.5		OK
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Bung Inserter

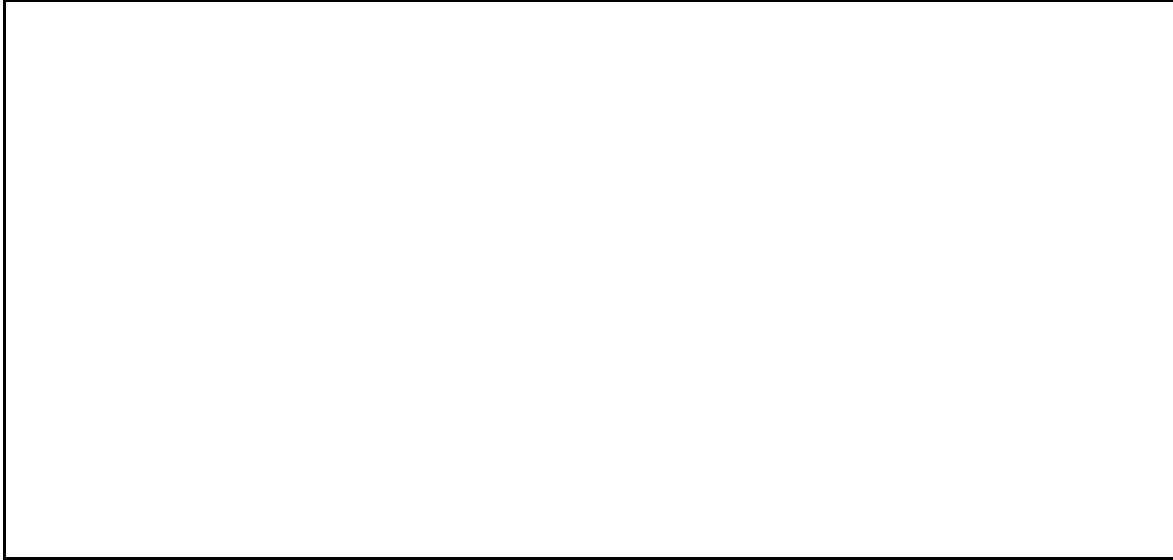
17 Check operation of bung inserter	Lubricate all moving components with synthetic lubricant containing PTFE		OK
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Other Comments

Electrolyte added to cells 1,3,4
Regulator gas flow adjusted from 110 kPa to 101 kPa

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Equipment Spares Re-Order



Officer : Troy Culgan

Date :11July 04

Station : Nauru