Safety Report - Commissioning

Competitor

(all steps are done maximum 30 minutes out of time – expert group by your side)

Name / Country code ..... / ..... Booth No.: .....

1. Visual Inspection (mark with X)

☐	Control box 1	(Complete, all ducts closed and all equipment's identified)
☐	Control box 2	(Complete, all ducts closed and all equipment's identified)
☐	Protective earth terminal	(all metal cable tray connected to X4,and control boxes panel, side wall and door connected to the earth)
☐	Plant Installation	All devices and housings fixed and all equipment's identified
☐	Power Supply OFF	Power socket (-X0) is disconnect (OFF)

2. Low Impedance Testing

Preparation for testing:	Equipment low impedance test value:	..... Ω

Control Box 1				Control Box 2			
- X0 / PE	-->	-X1/PE	..... Ω	- X0 / PE	-->	-X3/PE	..... Ω
- X0 / PE	-->	Panel	..... Ω	- X0 / PE	-->	Panel	..... Ω
- X0 / PE	-->	Side Wall	..... Ω	- X0 / PE	-->	Side Wall	..... Ω
- X0 / PE	-->	Door	..... Ω	- X0 / PE	-->	Door	..... Ω
- X0 / PE	-->	S7-rack	..... Ω				
- X0 / PE	-->	VSD Metal Frame	..... Ω				
- X0 / PE	-->	-A1	..... Ω				
- X0 / PE	-->	-T1	..... Ω				

Wall Installation:

- X0 / PE	-->	- X4	..... Ω
- X0 / PE	-->	Metal cable tray, left side	..... Ω
- X0 / PE	-->	Metal cable tray, right side – horizontal	..... Ω
- X0 / PE	-->	Metal cable tray, right side – vertical	..... Ω
- X0 / PE	-->	Motor MA1 frame	..... Ω
- X0 / PE	-->	Motor MA2 frame	..... Ω

3. Insulation Measurement

Preparation for insulation test:

3.1 - Competitor must wear safety glasses, long sleeves and insulated electrician gloves during insulation and voltage testing.

3.2 Turn ON **-Q1**

3.3 Turn ON **-F1/ -F2**

3.4 Remove the Delta/Star jumper's from the motor **MA1** and **MA2**

3.5 Remove the socket U2/V2/W2/PE (cable **–W3**) from the **VSD (-T1)**

3.6 Remove the lamp from **-E1**

3.7 Remove the front socket/plugs from **HEATER-controller (-T2)**

3.8 End of section 3. → undo steps 3.1 to 3.7

Allowed only in the presence of an expert group

Insulation voltage: 500V

Insulation Measurement device Test:

1. Device probes (test heads) in short circuit: Measurement = 0 Ω ..... (Y/N)
2. Device probes (test heads) in open circuit: Measurement > 200 MΩ ..... (Y/N)

Main circuit supply cable X0 --> X1

- X1 / L1, L2, L3, N	-->	-X1 / PE	..... MΩ
- X1 / L1, L2, L3, N	-->	-X1 / L1, L2, L3, N	..... MΩ

Main circuit Motor MA1, Cable -W3 (L1, L2, L3 - PE)

-W3 / L1, L2, L3	-->	-W3 / PE	..... MΩ
-W3/ L1, L2, L3	-->	-W3 / L1, L2, L3	..... MΩ

Main circuit Motor MA2, Cable -W2 (L1, L2, L3 - PE)

-X1 / 5, 6, 7	-->	-X1 / PE	..... MΩ
-X1/ 5, 6, 7	-->	-X1/ 5, 6, 7	..... MΩ

Load circuit Heater E1, Cable –W4 (L2, N, PE)

-X1 / 8,9 (L, N)	-->	- X1 / PE	..... MΩ
-X1 / 8 (L)	-->	- X1 / 6 (N)	..... MΩ

Insulation Measurement device Test:

1. Device probes (test heads) in short circuit: Measurement = 0 Ω ..... (Y/N)
2. Device probes (test heads) in open circuit: Measurement > 200 MΩ ..... (Y/N)

Don´t forget 3.8 End of section 3. → undo steps 3.1 to 3.7

4. Power and Commissioning

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4.1 - Testing: Residual Current Device (RCD) by Test Button

☐	Function OK	☐	Function Not OK

Turn OFF: -Q1 / -F1 / -Q4 / -Q7/ -F2 / - F3 / -F4 / -F5 on Control Box 1
Plug in Power Socket (X0)
Turn Power ON in the distribution cabinet

4.2 - Voltage Measurement –X1: 230V /400V ±10%

- X1 / L1	-->	- X1 / N	 V
- X1 / L2	-->	- X1 / N	 V
- X1 / L3	-->	- X1 / N	 V
- X1 / L1	-->	- X1 / L2	 V
- X1 / L1	-->	- X1 / L3	 V
- X1 / L2	-->	- X1 / L3	 V

4.3 - Rotation Field Measurement -X1:

☐	Rotation field is left-handed (CCW)	☐	Rotation field is right-handed (CW)

4.4 - Confirm the function of -Q1.

Turn -Q1 ON → Turn -Q1 OFF

- F1 / L1	-->	- X1 / PE	...../..... V	Operation off Q1 confirmed:
- F1 / L2	-->	- X1 / PE	...../..... V	..... (Y/N)
- F1 / L3	-->	- X1 / PE	...../..... V	

(ON) / (OFF)

4.5- Switch ON: -Q1 / -F1 / -Q4 / - F2

Switch ON: -F3 **-A1** is ON	☐	Function OK	☐	Function Not OK
Switch ON: PLC Power Supply and **-F4** PLC is ON, HMI is ON	☐	Function OK	☐	Function Not OK
Reset Function (-S2) Press **-S2** Emergency relay is ON? **-Q2** and **-Q3** is ON?	☐	Function OK	☐	Function Not OK
Emergency Stop Function Press **-S1** (A) **-Q2** and **-Q3** is OFF? Reset **-S1** (A) and press -S2 Emergency relay is ON? **-Q2** and **-Q3** is ON? Press **-S1** (B) **-Q2** and **-Q3** is OFF? Reset **-S1** (B)	☐	Function OK	☐	Function Not OK
-F5 Function Press **–S2** (reset) Switch ON **-F5**: **K7** power led is ON (on control box 2) Switch OFF **-F5**: **K7** power led is OFF	☐	Function OK	☐	Function Not OK

For the accuracy

_____	_____	_____
Signature by Competitor	Signature by Expert	C.C.
	_____	_____
	Signature by Expert	C.C.
Date: _____	_____	_____
	Signature by Expert	C.C.