Safety Report - Commissioning

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

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

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| 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) |

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| 1. **Low Impedance Testing**
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| Preparation for testing: | Equipment low impedance test value: | ………… Ω |
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|  **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 |  |
| 1. **Insulation Measurement**
 |
| Preparation for insulation test: * 1. - Competitor must wear safety glasses, long sleeves and insulated electrician gloves during insulation and voltage testing.
	2. Turn ON **-Q1**
	3. Turn ON **-F1/ -F2**
	4. Remove the Delta/Star jumper’s from the motor **MA1** and **MA2**
	5. Remove the socket U2/V2/W2/PE (cable **–W3**) from the **VSD (-T1)**
	6. Remove the lamp from **-E1**
	7. Remove the front socket/plugs from **HEATER-controller (-T2)**
	8. End of section 3. → undo steps 3.1 to 3.7

**Allowed only in the presence of an expert group** |
| Insulation voltage: 500VInsulation 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)
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**Don´t forget 3.8 End of section 3. → undo steps 3.1 to 3.7**

**4. Power and Commissioning**

**Allowed only in the presence of an expert group**

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| * 1. **- Testing:** Residual Current Device (RCD) by Test Button
 |
| **□** | Function OK | **□** | Function Not OK |

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

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| * 1. **- 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 |  |  |
| * 1. **- Rotation Field Measurement -X1:**
 |
| **□** | Rotation field is left-handed (CCW) | **□** | Rotation field is right-handed (CW) |

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| * 1. **- Confirm the function of -Q1.**
 |
| Turn -**Q1** ON  Turn -**Q1** OFF |
| - F1 / L1 | --> | - X1 / PE | …….……/…… V |  | **Operation off Q1 confirmed:** …………… (Y/N) |
| - F1 / L2 | --> | - X1 / PE | …….……/…… V |
| - F1 / L3 | --> | - X1 / PE | …….……/…… V |

 (ON) / (OFF)

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| **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 -S2Emergency 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**

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| Signature by Competitor |  | Signature by Expert | C.C. |
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|  |  | Signature by Expert | C.C. |
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| Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ |  | Signature by Expert | C.C. |