

PDR-OPS-037 PRODUCTION LINE DE-ICING PROTOCOL

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Document Classification: Confidential - Internal Use Only

Document Owner: Operations Department

1. PURPOSE AND SCOPE

1. This Production Line De-Icing Protocol ("Protocol") establishes mar
2. This Protocol applies to all Company manufacturing facilities where

2. DEFINITIONS

1. "Critical Components" means any BlueCore(TM) system elements,
2. "De-icing Event" means any instance where accumulated ice must
3. "Production Zone" refers to any designated area within Company fa

3. PREVENTION PROTOCOLS

1. Environmental Controls

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- 3.1.1. All Production Zones must maintain relative humidity levels belo

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- 3.1.2. Automated moisture detection systems shall continuously moni

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3.1.3. Air handling systems must incorporate HEPA filtration rated for

2. Component Preparation

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3.2.1. All Critical Components must undergo thermal conditioning for

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3.2.2. Anti-icing coating application required per Specification AC-202

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3.2.3. Thermal imaging verification required before component integra

4. DE-ICING PROCEDURES

1. Authorized Methods

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4.1.1. Only Company-approved de-icing compounds listed in Appendix

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4.1.2. Mechanical de-icing restricted to non-Critical Components using

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4.1.3. Thermal de-icing permitted only under direct Engineering supervision

2. Prohibited Methods

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4.2.1. Direct application of heat sources to BlueCore(TM) components

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4.2.2. Use of unauthorized chemical de-icing agents.

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4.2.3. Pressure washing or liquid immersion of assembled units.

5. DOCUMENTATION REQUIREMENTS

1. Each De-icing Event must be recorded in the Production Management

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Date, time, and duration

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Affected components/areas

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Methods used

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Personnel involved

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Post-procedure inspection results

2. Quality Control must verify and archive all de-icing documentation for

6. TRAINING AND CERTIFICATION

1. All personnel performing de-icing procedures must complete:

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Initial 8-hour certification training

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Annual 4-hour refresher course

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Quarterly practical assessments

2. Certification records maintained by Human Resources per SOP-HR

7. EMERGENCY PROCEDURES

1. In event of systematic icing affecting multiple production lines:

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Immediately notify Shift Supervisor

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Implement Emergency Response Plan ERP-2023-004

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Contact Facilities Management for environmental system assessment

2. Production halt required if ice accumulation exceeds Level 2 threshold

8. COMPLIANCE AND ENFORCEMENT

1. Compliance with this Protocol is mandatory for all production personnel

2. Violations may result in disciplinary action up to and including termination

3. Quality Control shall conduct weekly audits of de-icing documentation

9. PROTOCOL REVIEW AND UPDATES

1. This Protocol shall be reviewed annually by Operations and Engineering

2. Updates require approval from:

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Chief Operations Officer

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Chief Robotics Officer

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Quality Control Director

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Environmental Health & Safety Manager

10. LEGAL DISCLAIMER

This Protocol is proprietary and confidential to Polar Dynamics Robotics

Unauthorized distribution prohibited. Company reserves right to modify this Protocol without notice. Compliance with all applicable federal, state, and local regulations required.

APPROVAL AND IMPLEMENTATION

APPROVED AND ADOPTED this 15th day of January, 2024.

—

Sarah Nordstrom

Chief Operations Officer

Polar Dynamics Robotics, Inc.

—

Dr. James Barrett

Chief Robotics Officer

Polar Dynamics Robotics, Inc.

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