OPERATIONS DOCUMENT 394

STANDARD OPERATING PROCEDURES FOR AUTONOMOUS MOBILE ROBOT DEPLOYMENT AND MAINTENANCE

Effective Date: January 1, 2024

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1. PURPOSE AND SCOPE

1. This Operations Document ("Document") establishes binding operational procedures and protocols for the deployment, maintenance, and decommissioning of Polar Dynamics Robotics, Inc. ("Company") autonomous mobile robots ("AMRs") in temperature-controlled environments.

2. This Document applies to all Company personnel involved in AMR operations, including but not limited to field technicians, deployment specialists, maintenance engineers, and operational supervisors.

2. DEFINITIONS

1. "IceNav System" means the Company's proprietary cold-environment navigation and operation platform.

2. "Critical Operating Temperature" means any ambient temperature below -30 C (-22 F).

3. "Deployment Zone" means any customer facility where Company AMRs are installed and operational.

4. "Thermal Management Protocol" or "TMP" means the Company's standardized procedures for maintaining optimal AMR operating temperatures.

3. DEPLOYMENT PROCEDURES

1. Pre-Deployment Assessment

a) Conduct comprehensive site survey of Deployment Zone

b) Document all thermal zones and transition areas

c) Map facility layout using IceNav mapping protocols

d) Verify facility compliance with Company's Technical Specification 276-B

2. Installation Requirements

a) Calibrate thermal sensors according to Protocol TM-493

b) Initialize IceNav environmental learning algorithms

c) Establish redundant communication protocols

d) Verify emergency shutdown systems

4. MAINTENANCE PROTOCOLS

1. Scheduled Maintenance

a) Perform weekly diagnostic scans of thermal management systems

b) Conduct monthly actuator stress tests

c) Calibrate navigation sensors quarterly

d) Replace thermal interface materials semi-annually

2. Emergency Maintenance

a) Response time requirements:

- Critical failures: 2 hours
- Major disruptions: 4 hours
- Minor issues: 24 hours

b) Documentation requirements per Section 7

5. SAFETY REQUIREMENTS

1. All maintenance personnel must maintain current certification in:

a) Cold environment operations (CE-201)

b) AMR safety protocols (ASP-301)

c) Emergency response procedures (ERP-401)

2. Personal Protective Equipment

a) Required equipment for sub-zero environments

b) Electrical safety gear specifications

c) Communication device requirements

6. QUALITY CONTROL

1. Performance Metrics

a) Monthly uptime requirements: 98.5%

b) Navigation accuracy threshold: 5mm

c) Thermal variance tolerance: 2 C

2. Documentation Requirements

a) Maintenance logs

b) Performance reports

c) Incident documentation

d) Calibration records

7. REPORTING AND DOCUMENTATION

1. Required Reports

a) Daily operational status

b) Weekly performance metrics

c) Monthly maintenance summaries

d) Quarterly compliance reviews

2. Record Retention

a) Maintenance records: 3 years

b) Incident reports: 5 years

c) Performance data: 7 years

8. COMPLIANCE AND LIABILITY

1. This Document complies with:

a) ISO 10218-2:2011

b) ANSI/RIA R15.06-2012

c) Company Safety Standard CSS-401

2. Limitation of Liability

The Company shall not be liable for any consequential, incidental, or special damages arising from

the implementation of these procedures, except as expressly provided in the Master Service Agreement.

9. MODIFICATIONS AND UPDATES

1. This Document may be modified by the Company at any time, with notice provided to relevant personnel within 30 days of such modification.

2. All modifications must be approved by:

a) Chief Technology Officer

b) Chief Operations Officer

c) Chief Robotics Officer

AUTHORIZATION

APPROVED AND ADOPTED by Polar Dynamics Robotics, Inc.

By:

Katherine Wells

Chief Financial Officer

Date: January 1, 2024

By:

Sarah Nordstrom

Chief Operations Officer

Date: January 1, 2024