



OBJECTION HANDLING FAQ

SAMM TECH X MELTIO ENGINE BLUE

EXPEDITIONARY METAL ADDITIVE MANUFACTURING FOR DEFENSE SUSTAINMENT



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POWER AND DEPLOYMENT

Objection: Metal additive systems consume too much power for forward-deployed operations.

Response: The Meltio Engine Blue integrated into SAMM Tech was specifically selected for expeditionary manufacturing because of its comparatively efficient laser-wire DED architecture versus traditional powder-bed systems.

The system is designed to operate within deployable infrastructure environments and can integrate with:

- Tactical generators
- Shore power
- Expeditionary microgrids
- Mobile power systems

SAMM Tech's containerized architecture also allows the platform to deploy alongside existing field power assets without requiring permanent infrastructure.

Key Talking Points:

- Lower infrastructure burden than large industrial powder-bed systems
- Designed for expeditionary deployment
- Compatible with tactical support equipment
- Containerized for rapid transport and setup

RELIABILITY AND FIELD OPERATIONS

Objection: Can additive manufacturing systems actually survive military environments?

Response: SAMM Tech was purpose-built for austere and expeditionary operations. Unlike traditional factory-floor AM systems, the platform is housed within a ruggedized MILVAN-style container engineered for mobility and operational deployment. The Meltio Engine Blue's compact architecture and wire-fed process are particularly advantageous in field conditions because they reduce many of the contamination, handling, and environmental sensitivities associated with powder-based systems.

Key Talking Points:

- Ruggedized deployable container system
- Designed for land and maritime environments
- Reduced environmental sensitivity versus powder systems
- Integrated hybrid manufacturing platform
- Industrial-grade FANUC controls and automation

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MATERIALS AND PART PERFORMANCE

Objection: Are wire-fed printed parts strong enough for defense applications?

Response: The Meltio Engine Blue produces high-density, fully functional metal components using industrial wire feedstock materials already common across defense manufacturing and sustainment environments.

The system supports numerous defense-relevant alloys including:

- Stainless steels
- Titanium
- Nickel alloys
- Tool steels
- Aluminum
- Copper-based alloys

When combined with integrated CNC machining inside SAMM Tech, the platform can produce finished components suitable for repair, sustainment, tooling, fixtures, and mission-adapted fabrication.

Key Talking Points:

- Industrial-grade metal feedstock
- High-density metal deposition
- Multi-material capability
- Integrated machining for final tolerances
- Supports repair and remanufacturing workflows

POWDER VERSUS WIRE

Objection: Why use wire-fed DED instead of powder-bed fusion?

Response: Wire-fed laser DED offers significant operational advantages for expeditionary defense applications.

Unlike powder systems, wire feedstock:

- Is safer to transport and store
- Requires less environmental control
- Minimizes airborne particulate concerns
- Reduces material waste
- Simplifies logistics in deployed environments

For tactical sustainment and forward repair operations, wire-fed systems are often more practical and operationally resilient.

Key Talking Points:

- Safer feedstock handling
- Simplified logistics chain
- Reduced contamination concerns
- Higher material utilization
- Better suited for field deployment

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PRECISION AND FINISHING

Objection: DED parts require too much post-processing.

Response: That challenge is exactly why SAMM Tech integrates additive and subtractive manufacturing into a single platform.

The SAMM-DM010S-5AM combines:

- 3-axis metal additive manufacturing
- 5-axis CNC machining
- Automatic tool changing
- Integrated CAD/CAM workflows

This enables operators to print, machine, and finish parts within the same deployable system rather than relying on separate post-processing infrastructure.

Key Talking Points:

- Fully integrated hybrid manufacturing
- Print and machine in one system
- Reduced manufacturing footprint
- Production-ready component finishing
- Eliminates dependency on external machining assets

TRAINING AND OPERATIONS

Objection: These systems are too complicated for deployed personnel.

Response: SAMM Tech was designed to simplify expeditionary manufacturing workflows through automation, integrated controls, and onboard software tools.

The system incorporates:

- FANUC industrial controls
- Integrated CAD/CAM capability
- Automatic tool and head changing
- Predefined material print profiles
- Streamlined operator workflows

The goal is to reduce operational complexity while enabling sustainment teams to rapidly fabricate or repair mission-critical components.

Key Talking Points:

- Industrial automation
- Simplified workflows
- Automated process management
- Integrated software ecosystem
- Reduced operator burden

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DEFENSE USE CASES

Question: What defense applications make the most sense for SAMM Tech with Meltio Engine Blue?

Response: The platform is ideal for:

- Expeditionary sustainment
- Naval repair operations
- Legacy part replacement
- Obsolete component production
- Tooling and fixtures
- Emergency repair manufacturing
- Mission-specific fabrication
- Forward-deployed maintenance support

The system is particularly valuable in contested logistics environments where traditional supply chains may be delayed, degraded, or denied.

DIGITAL SUSTAINMENT

Objection: Why not just stockpile spare parts?

Response: Traditional inventory models are expensive, inefficient, and increasingly vulnerable to supply chain disruption.

Point-of-need additive manufacturing enables defense organizations to shift toward digital inventories where validated part files can be securely transmitted and manufactured locally. This reduces:

- Warehousing requirements
- Transportation burden
- Lead times
- Dependency on centralized suppliers

Key Talking Points:

- Transition from physical to digital inventory
- Reduced logistics footprint
- Faster sustainment response
- Improved operational agility
- Supports distributed operations

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STRATEGIC VALUE

Final Positioning Statement: SAMM Tech integrated with the Meltio Engine Blue is not simply a 3D printer.

It is a deployable expeditionary manufacturing capability designed to:

- Reduce logistics burden
- Improve readiness
- Sustain distributed operations
- Enable repair over replacement
- Deliver manufacturing capability directly to the tactical edge

BUILD. REPAIR. SUSTAIN. ANYWHERE.