

Heavy Machinery Coating Cases

2024 Edition

MUSI Technology - Spray Coating Specialist

Document Reference: MUSI-CS-HVY-2024

Issue Date: 2026

Manufacturer	Changzhou MUSI Environmental Technology Co., Ltd.
Phone	+86 181 5173 1332
Email	lin@coating-spray.com
WhatsApp	+86 181 5173 1332
Address	Wujin Industrial Park, Changzhou City, Jiangsu, China
Website	https://coating-spray.com

Industry Overview

Heavy machinery coating covers excavators, construction equipment, agricultural machinery, energy storage containers, and oil and gas components - large workpieces with demanding anti-corrosion and weatherability requirements. MUSI delivered 14 heavy machinery projects in 2024.

Sector Snapshot

Market Drivers

Infrastructure investment, agricultural mechanization, energy storage growth, oil and gas activity.

Coating Challenges

Very large workpieces (5-15 m), 2-coat or 3-coat anti-corrosion systems.

Production Pattern

Lower volume than automotive (10-100 units per day) but high value per unit.

Common Coating Challenges

Very Large Workpieces

Excavator booms, construction cabins, energy storage containers are 5-15 m.

Anti-Corrosion Performance

5-10 year outdoor warranty in tough environments.

2K or 3K Coating Systems

Primer + intermediate + topcoat for heavy-duty protection.

Surface Preparation

Sa 2.5-3 cleanliness via shot blasting before priming.

Logistics

Coordinating supply, manufacturing, and installation over 1-2 year project timeline.

Selected Case Studies - 2024

Excavator Boom Airless 2K Line

Field	Detail
Client Type	Construction equipment OEM
Region	Brazil
Scale	30 booms per day
Equipment Delivered	Shot blast cabinet + airless 2K spray cell + drying oven
Key Results	Salt spray 1,000h+, paint adhesion ISO 4624 Class 0, 30 boom/day
Status	Operating since 2023

Construction Equipment Cabin 5-Stage Pretreatment

Field	Detail
Client Type	Wheel loader manufacturer
Region	Russia
Scale	15 cabins per day
Equipment Delivered	5-stage pretreat + airless 2K paint cell + 60 deg C drying oven
Key Results	Pretreatment ISO 9227 certified, 2-shift output 30 cabins
Status	Operating since 2023

Agricultural Sprayer Tank Anti-Chemical Liner

Field	Detail
Client Type	Agricultural equipment maker
Region	Argentina
Scale	40 tanks per day
Equipment Delivered	2-coat epoxy + chemical-resistant topcoat + cure oven
Key Results	Chemical resistance to fertilizers and pesticides certified
Status	Operating since 2024

Energy Storage Container Robotic Coating Line

Field	Detail
Client Type	ESS manufacturer
Region	China
Scale	50 containers per shift
Equipment Delivered	2x KUKA robots in 14x6x5 m booth, 2K PU paint
Key Results	30-day weatherability, salt spray 1000h, color +/-1.5 dE
Status	Operating since 2024

Heavy Steel Structure Shot Blast Sa 2.5

Field	Detail
Client Type	Bridge fabricator
Region	Brazil
Scale	500 m ² surface per day
Equipment Delivered	Roller conveyor shot blast Sa 2.5 + airless 2K priming
Key Results	Sa 2.5 surface cleanliness verified, 1,000h salt spray
Status	Operating since 2023

Oil and Gas Vessel External Coating

Field	Detail
Client Type	Vessel fabrication yard
Region	Middle East
Scale	10 vessels per month
Equipment Delivered	Manual cabinet shot blast + airless 2K offshore-grade coating
Key Results	NORSOK M-501 compliant, 20-year offshore warranty
Status	Operating since 2024

Benefits Delivered to Clients

Large-Workpiece Capability

Booths up to 14 m for energy storage containers, excavator booms.

Heavy-Duty Anti-Corrosion

2K airless and 3-coat systems for offshore and infrastructure.

Surface Preparation

Sa 2.5-3 shot blast integrated with coating line.

NORSOK and ISO Compliance

Offshore-grade coatings certified for North Sea standards.

Lower Volume High Value

Engineered for 10-50 units/day, high-margin.

Long-Term Aftersales

Multi-year service contracts for refurbishment.

Industry Key Metrics

Metric	2024 Performance Average
Projects delivered	14 heavy machinery projects
Average daily output	10-50 units
Anti-corrosion warranty	5-20 years (offshore)
Salt spray average	1,000+ hours
Surface preparation	Sa 2.5-3 (ISO 8501)
Compliance	ISO 12944, NORSOK M-501, GB-China
Customer satisfaction	4.7 / 5.0
Geographic coverage	7 countries

Contact MUSI Technology

For inquiries, technical questions, or to request a custom quotation, please contact our sales engineering team:

Channel	Details
Sales Email	lin@coating-spray.com
Phone (Sales)	+86 181 5173 1332
WhatsApp	+86 181 5173 1332
Website	https://coating-spray.com
Headquarters	Wujin Industrial Park, Changzhou City, Jiangsu Province, China
Business Hours	Monday-Saturday 08:30-18:00 (GMT+8)
Response Time	Sales inquiries within 24 hours, technical proposals within 5-7 business days

How We Engage

Step 1 - Discovery

Share workpiece specifications, target throughput, color count, facility layout, and budget. Engineers respond with technical questions within 24 hours.

Step 2 - Process Simulation

We model your line in 3D, simulate cycle time and energy consumption, and provide a baseline ROI analysis.

Step 3 - Proposal and Quotation

Detailed technical proposal with layout drawings, equipment list, payment terms, and delivery schedule.

Step 4 - Manufacturing

Custom fabrication in our 28,000 sqm facility under ISO 9001 QMS. Progress photos shared via customer portal.

Step 5 - Factory Acceptance Test

You witness or remotely observe pre-shipment testing.

Step 6 - Site Installation

MUSI engineers travel to your site for installation, commissioning, and operator training.

Step 7 - Aftersales Support

Warranty support, remote diagnostics, preventive maintenance, and spare parts supply via our global network.