mspro

AUSTRALIAN BRAND

WEAR SOLUTIONS

PRODUCT & APPLICATION HANDBOOK

Wear protection. Component restoration.



PLATES & LINERS / ENGINEERED PARTS
SURFACE ENGINEERING / REPAIR & REBUILD

Built for Industry. Engineered for Performance.

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WEAR SOLUTIONS

OVERVIEW

Protect. Restore. Keep moving.

MSPRO combines Australian customer support with specialist technical and manufacturing partners in China to coordinate wear components, material selection and surface engineering solutions.

From replacement liners to customised components and restoration of worn parts, the solution starts with the equipment, operating conditions and maintenance objective.

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Product images illustrate partner-supported component options.

Wear plates & liners

Overlay alloys on a steel backing provide replaceable protection for surfaces exposed to abrasive material flow. Plate and liner geometry can be coordinated to drawings and equipment requirements.



Smooth plate stock



Cut liner components

Supply options

Flat plate, cut-to-shape liners and formed components. Thickness, backing, overlay system, fixing arrangement and tolerances are agreed for the application.

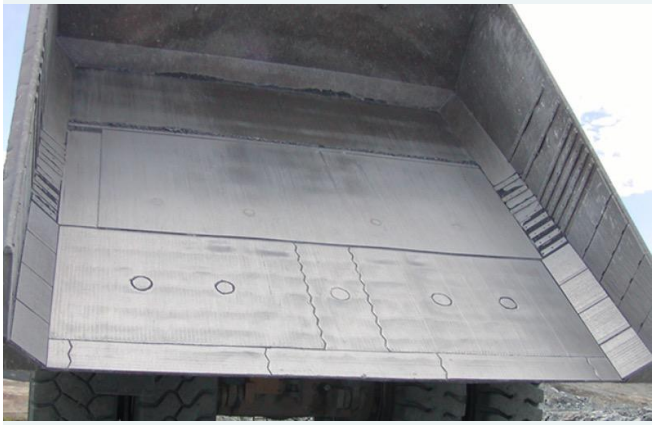
Typical applications

Chutes, hoppers, bins, feeders, transfer points, fan components and cement equipment.

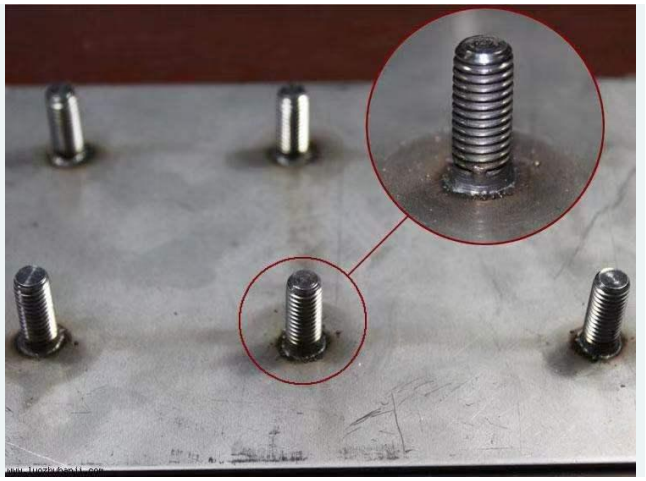
Specify backing + overlay thickness separately.

Smooth overlay plates

The MWMS-CF series uses a continuous submerged-arc process to apply a wear-resistant alloy onto a structural backing plate. The smooth overlay is intended for sliding wear and material transfer applications.



Hopper liner



Stud fixing example

MWMS-CF60	MWMS-CF80
High abrasion with medium impact.	Severe abrasion with higher impact.

The smooth surface can help material flow and reduce hang-up. The effect depends on the material, moisture, geometry and operating conditions.

Cut, form and fix to the equipment requirement.

Wear pipes & fittings

Internal wear protection can be coordinated for abrasive conveying and material transfer components. The choice of material and process depends on particle characteristics, velocity, impact and access to the bore.



Lined pipe



Formed wear component

Component options

Pipes, formed sections and transition components can be reviewed to drawings. Bore size, access, joining method and inspection requirements determine feasibility.

Application focus

Mine backfill and slurry handling, bulk material transfer and dust-handling equipment, subject to a review of the service environment.

Include bore, wall, length, flange and flow details.

Engineered wear parts

Custom components combine the required geometry with a suitable wear material and fabrication route. Options include flat, curved, bolted and formed parts for replacement or equipment protection.



Formed liner components



Fixing detail

From drawing to component

Liners, wear strips, fan parts, mixer parts and other drawing-based components can be assessed for material, cutting, forming and attachment details.

Define the interface

Provide hole positions, datum surfaces, mating parts, tolerances and replacement limits. Where needed, inspection points are agreed before production.

Designed around the component and its wear conditions.

Repair & remanufacturing

Worn components may be assessed for rebuilding, dimensional restoration and renewed surface protection. Repair suitability depends on the base material, damage, remaining section and duty of the component.

01

Assess

Identify wear, damage and repair limits.

02

Select

Match alloy and process to the component.

03

Restore

Rebuild or coat the agreed surfaces.

04

Verify

Check the agreed dimensions and surface condition.

Repair route and acceptance criteria are agreed per project.

Surface engineering processes

Process selection follows the wear mechanism, component geometry, substrate and functional requirements. Specialist partners support the manufacture or restoration route selected for the project.

01 Open-arc hardfacing

Overlay wear protection and rebuilding.

02 Submerged-arc surfacing

Plate overlays and selected component surfaces.

03 Plasma transferred arc (PTA)

Powder-fed alloy and carbide overlays.

04 Laser cladding

Localised surface engineering and restoration.

05 HVOF thermal spray

Sprayed coatings for suitable wear environments.

Process availability and component suitability are confirmed during technical review.

WEAR SOLUTIONS OVERLAY

MSPRO Wear Material Systems

MWMS is the commercial designation for MSPRO Wear Material Systems. Select the material to suit wear, impact, temperature and component requirements.

MWMS-55	Chromium carbide overlay
MWMS-60	Chromium carbide overlay
MWMS-65	Chromium carbide overlay
MWMS-80	High-alloy chromium carbide overlay
MWMS-H	Overlay for elevated-temperature service
MWMS-TCO6000	Tungsten-bearing overlay
MWMS-CF60	Smooth overlay series
MWMS-CF80	Smooth overlay series

MWMS codes identify materials, not guaranteed hardness levels.

Cladding material systems

Carbide-reinforced and special alloy systems extend the material options for component surfaces. Powder, substrate and process compatibility are reviewed together.

MWMS-WC40P / MWMS-WC70P

Nickel-matrix options include nominal 40% and 70% tungsten carbide material systems. Typical applications include chutes, tubes, rollers, valves and selected mixing or fan components.

MWMS-3401

Special alloy options are described for high-wear applications including liners, blades, ground-engaging tools and slurry-related components.

TYPICAL MATERIAL DATA

MWMS-WC70P	WC phase: 2000-2600 HV0.2
MWMS-3401	HRC 63-68

Supplier-reported typical values for the relevant systems. These are not guaranteed acceptance limits or interchangeable hardness scales.

Final material, powder specification and inspection scope are confirmed per project.

Industries & applications

Wear protection is organised around the component and operating conditions, with material and process options matched to the application.

Mining & quarrying

Chutes, bins, hopper liners, buckets and wear pipes.

Cement & mineral processing

Cooler wear parts, transfer liners and separator components.

Ports & bulk handling

Transfer points, chutes, hoppers and conveyor-related liners.

Steel & metallurgy

High-temperature wear surfaces, hot-dust components and chutes.

Industrial fans

Blades, liners and selected wear-exposed surfaces.

Mixing & heavy equipment

Mixer wear parts, blades, bucket protection and repair components.

WEAR SOLUTIONS QUALITY

Inspection & technical support

MSPRO coordinates product and project requirements with specialist manufacturing partners. Inspection and supporting documents are specified to suit the material, process and agreed acceptance criteria.

Dimensions & visual condition

Thickness, geometry, fixing details and surface condition.

Hardness & composition

Material-specific testing where required and agreed.

Metallography & wear testing

Selected material or process evaluation where available.

Process & project records

Define applicable inspection points and document requirements.

Inspection scope and documentation are agreed before supply.

WEAR SOLUTIONS

ENQUIRY

Build the project brief

A clear application brief helps identify a practical material and manufacturing route. Drawings and photographs are welcome; an existing part can also be assessed where appropriate.

Component & drawing

Part name, dimensions, drawings, quantity and fixing details.

Wear & operating conditions

Abrasive material, particle size, flow, impact, temperature and moisture.

Material & maintenance objective

Existing base material, failure pattern, repair or replacement objective.

Acceptance & delivery

Required inspection, documents, destination and delivery timing.

Send the component details to start a technical review.

AUSTRALIAN BRAND

Industrial Welding & Wear Solutions

MSPRO is an Australian industrial brand operated by DSM AU PTY LTD, combining welding consumables with partner-supported engineered wear solutions for fabrication, repair and component protection.

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Application guide only. Final material grades, dimensions, process suitability, availability and inspection documents are confirmed per project. Photographs illustrate component forms and do not imply MSPRO ownership of manufacturing facilities.

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