

FLOWCLAD™ is a non-directional chromium carbide overlay wear plate — the wearing surface performs in any direction, unlike traditional wear plate where the weld direction determines the orientation of the plate.

Manufactured using advanced powder-metallurgy cladding technology, a submerged-arc process fuses a super wear-resistant alloy layer onto a low/medium carbon steel substrate in a single pass. The result is a smooth, weld-bead-free plate that reduces the coefficient of friction, increasing productivity and minimising product hang-up.

MATERIAL & MICROSTRUCTURE

- High-chromium alloy wear layer enhanced with special alloying elements
- Carbide volume fraction of 40–65%
- Fibrous carbide structure oriented perpendicular to the wear surface for maximum abrasion resistance

MECHANICAL PROPERTIES

- Surface hardness of HRC 58–65
- Ultra-high hardness with retained toughness
- Excellent impact resistance combined with outstanding wear resistance

QUALITY & WORKABILITY

- Single-pass weld deposition for consistent quality
- High-strength metallurgical bond with a defect-free interface
- Excellent machinability for cutting, rolling, forming and fabrication

Benefits

- Smooth, non-directional surface leads to less hang-up
- Reduced friction coefficient improves material flow
- Increased productivity
- Extended equipment service life
- Excellent corrosion resistance

Applications

Applications involving high sliding abrasion and medium impact, such as:

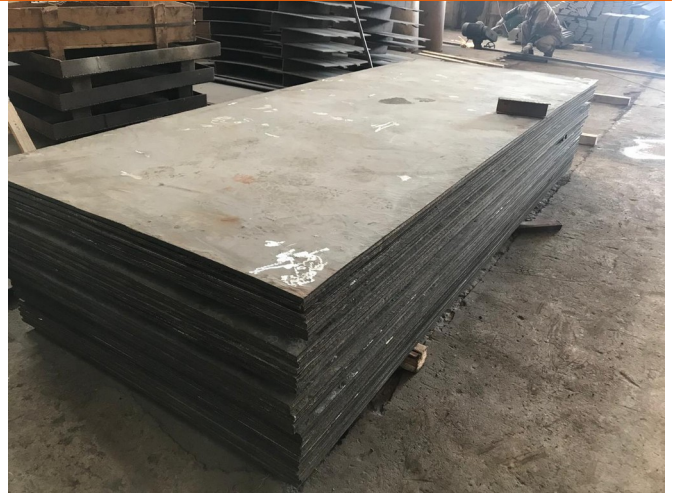
- Chutes
- Feeders
- Deflector / Impact plates
- Stackers / Reclaimers
- Loaders
- TLO – Train load out
- Buckets
- Slurry pipe linings
- Hoppers
- Pan liners

QAME stocks a variety of FLOWCLAD™ wear plates, including smooth and polished surfaces. **Standard thickness** is available in the following combinations, however any thickness combination is achievable:

Hardface (mm)	6	6	7	8	9	8	9	10	12	8	9	10	17	20
Backing (mm)	6	8	8	8	8	10	10	10	10	12	12	12	12	12
Total thickness (mm)	12	14	15	16	17	18	19	20	22	20	21	22	29	32



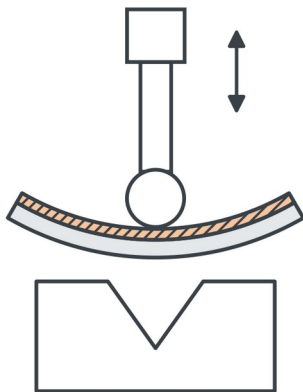
FLOWCLAD™ smooth surface liner installed — dozer blade



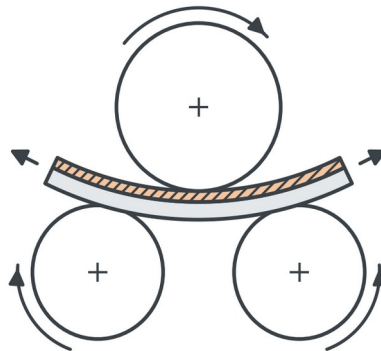
FLOWCLAD™ plate stock ready for dispatch

FORMING & FABRICATION

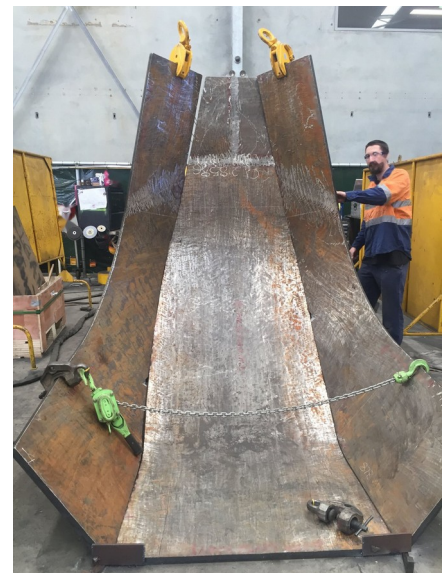
Because the wearing surface is non-directional, FLOWCLAD™ can be press-bent or rolled in any direction to suit chutes, hoppers, pipes and formed liners. Plate can be plasma cut, drilled from the mild steel side, and attached by plug welds, studs or perimeter fillet welds.



Press bending



Rolling — any direction



Formed transfer chute liner

CHEMICAL COMPOSITION

Grade	C	Si	Mn	Cr	W	Mo+Nb+Ti+V+W	Bal.
FLOW60	3.5–7.0%	0.5–2.5%	0.5–2.5%	23–35%	–	–	Fe
FLOW80	3.5–6.0%	0.5–2.5%	0.5–2.5%	23–35%	–	2.0–4.0%	Fe
FLOW6000	3.5–7.0%	0.5–2.5%	0.5–2.5%	23–35%	3.0–7.0%	–	Fe

Typical weld deposit chemistry. Values are indicative and may vary with plate thickness and number of deposit layers.

FLOWCLAD™ wear plate is particularly suited to material handling systems across the mining, cement and power generation industries, where it significantly reduces maintenance costs and improves production efficiency. Plates can be cut, rolled and fabricated to suit, and customised in a range of thicknesses and specifications to meet specific operational requirements — contact our team to discuss your application.



In service — bucket wheel excavator, high sliding abrasion duty