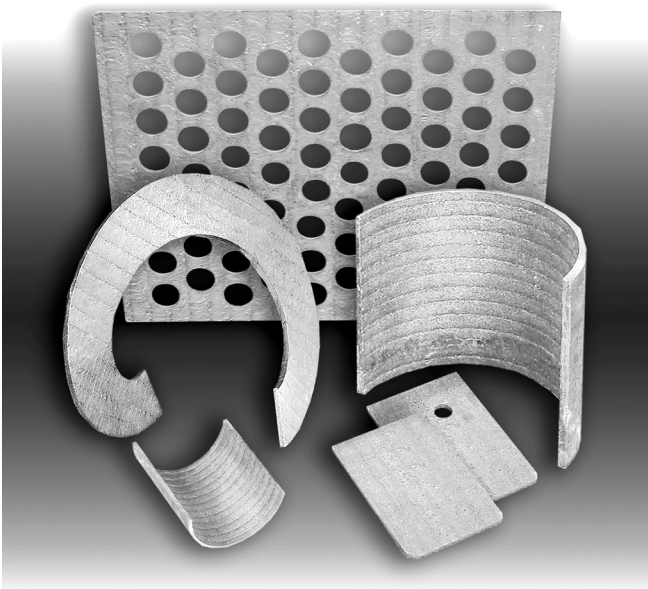


»» Hard Overlay Welding KALMETALL of Different Alloys

Cost-Effective for Large Surfaces



KALMETALL incorporates several hard overlay welded steel systems that consist of a tough basic body and hard overlay welding.

The base metal provides the strength of the system. Depending on the specific application, it is made of standard or special steels.

S 235 JRG 2 is the standard material for operating temperatures up to 350 °C / 662 °F. The standard thickness of the base material is from 5 mm upwards.

Hard overlay welding is the wear protection layer. It consists of a C-Cr-Fe system with primary chromium carbides. It ensures the great hardness of the overlay welding which – depending on the composition of the alloy – may be up to 820 HV.

Standard thickness of overlay welding is 3 to 12 mm, 18 mm at maximum.

Standard sizes of hard-faced metal plates range from 900 x 1,900 mm to 1,900 x 3,900 mm.

The advantages of KALMETALL:

- overlay welded metal plates of different qualities, thickness and dimensions
- depending on the alloy of the hardfacing, it is characterized by high resistance to abrasion, high impact strength and high temperature stability
- specially fabricated, customized components are possible
- wide range of application and adaptation to the specific use
- low weight and high economic efficiency is provided when the component has been designed as a self-supporting structure



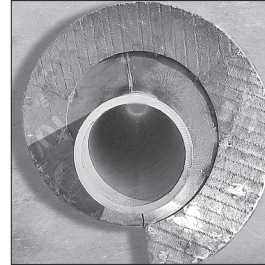
At Any Rate the Correct Material:

KALMETALL is the Optimal Problem Solution for Varying Applications

Various overlay welding alloys are offered. They are selected with due regard to stress resulting from abrasion, impact and temperature.

Kalenborn offers:

- complete lining systems consisting of hard faced metal plates for installation into existing steel structures
- self-supporting fabrications with hardfacing
- combinations of ceramic and metallic systems for wear resistant design of high economic efficiency



Screw conveyors protected with KALMETALL W100, up to 2,000 mm diameter, up to 10,000 mm length



Separating cones of cement classifiers made of KALMETALL W100 6+4, 3,000 mm diameter

Technical data (reference values)

KALMETALL	Chemical composition of welding material %						Hardness HV	Max. application temp. °C/°F	Resistant against		
	C	Cr	Mo	Nb	B	Fe			abrasion	impact	temp.
W100	5	30	-	-	-	60	700	350/ 662	xx	x	x
W143	5	22	-	7	-	60	740	350/ 662	xxx	x	x
W145	5	21	7	7	-	60	800	750/ 1382	xxx	x	xxx
W150	5	30	-	-	1	60	820	350/ 662	xxxx	-	x
W151	5	30	3	-	-	60	700	550/ 1022	xx	x	xx

Fastening systems

- plug welding
- rear welding to the basic body
- rear welding to a nut with internal thread
- screw-type fastening by stud welding
- screw-type fastening by counter sunk rings
- suspended systems

Typical applications

- bunker lining
- chutes
- concrete mixer lining
- cyclone lining
- fans (linings, fan blades)
- mill lining
- pipes (dust pipes, ash pipes, etc.)
- separator lining
- sieves

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Kalenborn

Wear Protection Solutions