ACMECAST®

Steel, Stainless Steel, High Alloy & Super Alloy-
Castings, Spares, Replacement Parts & Custom Made Components
Manufacturer - Supplier to OEM's, Plants and Process Industry
Heat, Wear, Abrasion, Pressure and Corrosion Resistant Alloys for Specific End Applications
Conversion to an Integrated Casting from Fabrications, Forgings and Welded Assemblies
Fabricated and Welded-Parts, Components & Assemblies in Steels and Stainless Steels
Engineering & Metallurgical Consulting

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ACME® - Wear Plates

High Performance Composite
Wear-Abrasion-Impact Resistant
Wear Plates for Service Temperatures up to 800°C

ACMECAST®/ ACME® ALLOYS offers high performance wear plates for power, cement, steel, mineral, mining and ore processing industry. Wear plates are offered in solid cast single piece as well as composite wear plates. This document provides information about our composite wear plates.

ACME® composite wear plates having highly alloyed wear resistant surface on a low carbon steel substrate base, offers optimal combination of metallurgical properties such as high strength, good fracture toughness, superior wear-abrasion resistance and lower life cycle cost. These plates are manufactured by customized, computer numerically controlled (CNC) hardfacing process resulting in a hard, tough and highly wear resistant surface. The mild steel substrate plate makes the plates amenable to easy forming, welding or bolting to the component surfaces required at customer industry specific end applications.

ACME® in its products offers competitive advantage over competition of its knowledge, expertise and experience in material science, metallurgy, engineering and manufacturing; both in its welded/ hardfaced products as well as single piece casted plates or fabricated formed plates products. The superiority of our products life is due to strict scientific and metallurgical control at all the stages of production processes, backed up by knowledge of high temperature, and wear alloy metallurgy.

Advantages of ACME Composite Wear Plates

1. Composite wear plates are cheaper than casted wear plates. However single piece casted wear plates offer much longer useful life in end application and can withstand much severe service condition(s)
2. Ease in fabrication of components viz. pipes, ducts, chutes and alike
3. Ease of welding to carbon steel structures
4. Available in cut-to-shape/size as per customer requirements. We also provide custom made holes in the composite wear plates(counter sunk or any other type) to suite clients bolting requirements with its equipment
5. High concentration of carbides-excellent resistance to wear factors like abrasion, friction, erosion, impact and oxidation
6. Tougher matrix ensures proper anchorage of the carbide particles
7. Very small heat-affected zone ensures minimum metallurgical degradation and plate distortion
8. Controlled metallurgy of hard facing alloy, and weld deposition metallurgy of hardfaced composite wear plates

Product Range

Type	Item Description	Alloy Base	Rockwell Hardness	Applications
ACME®- High Chrome Alloy	Complex carbides in tough matrix for resistance to severe abrasion and moderate impact loads	C, Cr, Mn, Mo	HRC 55-58	Crusher parts, bucket lips, conveyor screws, chutes
ACME®- MX(Modified) Alloy	Dense micro-carbides dispersed in a hard martensitic matrix resisting severe coarse and fine particles abrasion	C, Mn, Cr, Mo, Ti	HRC 58-62	Mixer blades, scrapers, mill parts, pipes
ACME®- MX Alloy	High temperature carbides in an austenitic matrix to resist complex wear at elevated temperatures. Retains hardness up to service temperatures of 800°C. It can handle thermal cycling and thermal fatigue due to variation in temperature.	C, Cr, Mn, Mo, Nb, V	HRC 62-65	Sinter plant parts, chutes, boiler flue gas ducts

Industry Applications

Example of end applications in an industry segment are mentioned.
List of parts mentioned are neither OEM specific nor representative of complete product range

Power	Wagon tipplers, excavators, chutes, primary and secondary crushers, coal pipes, bunkers, apron feeders, mill vane wheel segments, boiler flue gas ducts, ash pipelines, screw conveyors, nozzle tips
Cement	ID fan blades, chutes, coal pipes, crushers, earth moving equipment, Y-ducts, clinker chutes, cyclones
Steel	Sinter screen decks, hot discharge chutes, down-comer pipes, burden liners, burden – over plates, discharge chutes, liners, vibratory feeders, rolling mill guides
Mining	Chute liners, shovel buckets, dragline buckets, dumper bodies, dozer blades, crusher parts, apron feeders, conveyor systems
Chemical	Crushers, mixing blades, slurry pipes, blowers, deflector plates

Sizes Available

Plate dimensions: Plates are available as per drawings/ and or custom made to clients requirements
Thickness: Base layer – 6 mm, 8 mm, 10 mm, 12 mm, 16 mm. Higher thickness on request
Hardfacing Layer: 4 mm, 5 mm, 6 mm. Higher thickness of deposit, multi pass on request
Bent Plates: The plates may be supplied in bent forms in accordance to customer requirements specified in its drawings. The minimum bending diameter is 300 mm for the hardfaced layer inside. For joining the plates, counter sunk holes can be provided to facilitate attachment at customer end. Unbrako India Limited, make bolts can be supplied with the plates on request. These features are optional and shall be charged extra. Generally speaking, basic coated mild steel electrodes may be used to weld the plates to the components.

Wear Strips/ Wear Pads

Wear strips and wear pads with all the same features as those of composite wear plates can be provide for ease in attachment, use and workability at clients plant. These are available in different sizes as per requirement of the end user. In addition, such wear strips and wear pads have also found use in earth moving equipment and preparation of conveying systems in different industries. They render economical and faster repairs with quick inter-changeability.

Talk to us of your end applications need to work towards cutting downtime and improving productivity.

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