

### PRODUCT DESCRIPTION

**AB 300** is an extra hard clad plate with additives that offers even higher abrasion resistance in severe stress applications with moderate impact conditions.

AB 300 has excellent characteristics against severe abrasive wear with increased resistance to impact. Service life is extended compared to our AB-200 due to the inclusion of fine Niobium carbides in the matrix. Our fully automated production method and our quality control procedures secure a product with homogenous chemical analysis and hardness.

### AB 300 ADVANTAGES

- Superior wear resistance
- Flat and smooth as welded surface
- Uniform hardness and chemical composition
- Heat resistance (Hardness of HRC 60±2 up to 400 °C)
- The addition of FeNb prevents the detachment of  $M_7C_3$  carbides from the matrix due to their finely dispersed distribution, giving an extended service life to the material
- Easily welded due to the mild steel backing plate
- Cold formed to shape
- Internal rolling diameter down to 250mm depending on total thickness
- Very good fusion to the base plate
- Low dilution of the alloy
- Service life 6 to 12 times higher compared to mild steel depending on the application

### INDUSTRIES & APPLICATIONS

**Industries:** Mining, Cement, Steel, Power Generation, Glass, Wood, Paper, Recycling.

**Applications:** Pipes, Concrete Mixers, Mill linings, Separators, Screens, Excavator Bucket and Bucket Wheel Linings, Clinker and Dust Ducts, Fans and Fan Housings, Chutes, Truck Liners, Screw Conveyors, Agricultural Equipment, Hammer Mills and Beater Bars.

#### ○ Overlay composition

Chromium rich, high carbon and Manganese alloy. C-Cr-Mn-Nb-B-Fe

#### ○ Base plate materials

All types of weldable structural steels including stainless steel

#### ○ Microstructure

Chromium rich Primary Carbides  $M_7C_3$  dispersed in an austenitic matrix.

M indicates the mixture of iron and Chromium.

A dense arrangement of needle like carbides offers AB 300 material excellent abrasion resistant properties.

NbC particles prevent the detachment of  $M_7C_3$  carbides.

Stress relief cracks are visible every 20-40mm with a length of 2-3 welding beads.

Surface density fraction 45 -50% with even distribution.



#### ○ Dimensions & Thicknesses

##### Standard Format

Standard plate sizes available in stock	
Base Plate	Clad Area
1.500 x 3.000 mm	1.400 x 2.950 mm
1.250 x 2.500 mm	1.150 x 2.450 mm

##### Special Format

Base Plate	Clad Area
2.000 x 4.000 mm	1.900 x 3.950 mm
1.000 x 2.000 mm	900 x 1.950 mm

##### ABRAPLATE AB 300 Standard THICKNESS

Standard plate thickness available in stock	
Base Plate Thickness mm	Cladding Thickness mm
3	3 to 4
5	3 to 4
6	3 to 6
8	3 to 10
10	3 to 17
12	3 to 18

Overlay thickness ≤ 6 mm: one layer,  
>6mm: two layers  
>12mm: three layers

Minimum overlay applied: 3mm

Maximum overlay applied:  
18mm in 3 layers

\*customized base plate  
thicknesses upon request

#### ○ Tolerances

- Thickness Tolerance: +1mm, -0mm
- Flatness Tolerance: ±3 mm for length over 3000mm

#### ○ Fabricating

- Cutting methods: Water jet, Plasma & Laser cutting (Oxy fuel is not effective)
- Bending with the use of rollers or press brake equipment
- Welding method as for conventional steel due to ABRAPLATE mild steel base plate
- Fixing and bolting using machined inserts, studs, or plug welding
- Machining and drilling is not possible