Amera-Braze 420 by Ameralloy is a heat treated, ultra-high impact and abrasion resistant alloy steel plate and strip. With a combination of excellent toughness and high hardness, Amera-Braze 420 has the capability to resist shock, impact, abrasion, stress, and vibration.

Because of its high strength formulation, a reduction of dead weight is achieved by using Amera-Braze in half the thickness of the original chute, liner, or wear area.

**Features And Advantages**

- Ultra-high wear resistance
- Heat treated, quenched, and tempered to a high Brinell hardness
- Excellent weldability
- Depth hardened
- Fine grain structure
- High tensile strength
- Corrosion resistance six times greater than mild steel
- Can be formed, rolled, and drilled
- Abrasion, impact, and wear properties retained at weld joints

**Typical Mechanical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength psi</td>
<td>198,000</td>
</tr>
<tr>
<td>Yield point psi</td>
<td>165,000</td>
</tr>
<tr>
<td>Elongation in 2&quot;</td>
<td>16%</td>
</tr>
<tr>
<td>Reduction of area</td>
<td>52%</td>
</tr>
<tr>
<td>Brinell hardness</td>
<td>390–420</td>
</tr>
<tr>
<td>Rockwell C hardness</td>
<td>39–46</td>
</tr>
</tbody>
</table>

**Welding**

Use low hydrogen high tensile electrodes: AWS specification E100XX, E110XX, or E120XX electrodes.

- Carbon .18/.28
- Manganese 1.15/1.50
- Silicon .20/.35
- Molybdenum .08/.28
- Aluminum .03 max.
- Chromium .40/1.00
- Nickel .25 max.
- Boron .0005 min.
- Phosphorus .025 max.
- Sulfur .040 max.

*Typical Analysis May Vary By Heat Lot*
Applications

- Agricultural tynes
- Agitator paddles
- Arms for lift trucks
- Backup plates
- Baffle plates
- Bucket lips
- Bulldozer blades
- Car plates
- Chain links
- Chain slide runners
- Chutes:
  - Coal
  - Coke
  - Glass
  - Grain
  - Gravel
  - Limestone
  - Ore
- Refuse
- Rock
- Sand
- Slag
- Slate
  - Classifier screens
  - Coke bins
  - Conveyor buckets
  - Crusher hammers
  - Clam shell bucket lips
  - Concrete mixer liners
  - Concrete pipe liners
  - Deck plates
  - Doors
  - Dredge pump liners
  - Drag line buckets
- Dipper sticks
- Dump truck beds
- Eye bars
- Fan blades/housings
- Flotation plates
- Flume liners
- Funnels
- Furnace liners
- Grater blades
- Hoppers
- Launder plates
- Loaders
- Log-washer paddles
- Muller bottoms
- Mixers
- Oscillator Liners
- Ore car bodies/liners
- Ore pocket liners
- Pressure plates
- Scrap bale liners
- Scrapper blades
- Shakeout liners
- Shot-blast liners
- Skip cars and liners
- Sluice plates
- Spiral castings
- Transfer car liners
- Truck box liners
- Vibrators
- Wear bars
- Wear plates
- Wearing strips
- Wheelabrator end plates

Available Sizes

Amera-Braze 420 Plates
Thickness: 1/4” 3/8” 1/2” 5/8” 3/4” 1” 1-1/4” 1-1/2” 1-3/4” 2” 2-1/2” 3”
Thicknesses over 3” upon request
Widths: 48” 60” 72” 84” 96” or burned to your specifications
Lengths: 96” 120” 144” 240” 288” or burned to your specifications

Amera-Braze 420 Wear Strips
Thickness: 1/4” 3/8” 1/2” 5/8” 3/4” 1” 1-1/4” 1-1/2” 1-3/4” 2”
Thicknesses over 2” burned to your specifications
Widths: Burned to your specifications
Lengths: Maximum of 24”

Fabrication & Machining
Forming, rolling, punching, and perforating to your specifications