

MAGNA 405 AC-DC

A tough but machinable overlay for building up of worn parts which will be subjected to wear. Has these exclusive features:

- 1. Exceedingly High Toughness.** Magna 405 is just within the machinable range. It has high compressive strength. It is ideal for building up of worn parts where the weld must be machined yet prolonged service is necessary after machining.
- 2. Non-Cracking.** Heavy overlays or thick build-ups can be made without cracking. Magna 405 has a built-in resiliency and will absorb shock without cracking. Excellent for overlaying high carbon or low alloy steel, where cracking could be a problem with ordinary electrodes. This is an excellent electrode for use as a base on large fills before hard surfacing electrodes are applied because of its cushioning effect, along with excellent compressive strength and toughness.
- 3. Flame-Hardenable.** Excellent for flame hardening or pack hardening on a part where a high hardness deposit is required Magna 405 can be applied then machined, and then flame hardened for extreme wear resistance.
- 4. Extraordinary Weldability.** Magna 405 gives a super fast deposition because it can be applied 'pass-over-pass' without slag removal. The coating produces a slag which has a light viscosity and floats to the surface leaving no slag entrapment. The electrode has no spatter. It is readily usable in all positions including overhead and vertical and results in unusually smooth deposit often requiring little or no machining where precision is not required. There is never any porosity and slag is easily removed.

5. Typical Applications:

Tractor shoes	Mine car wheels	Jack bits
Sprockets	Concrete mixer blades	Roll ends
Rollers	Water well drill bits	Clutch faces

APPLICATION

Apply using either AC or DC welding machines. Where machinability is required apply using straight polarity DC equipment.

Clean and degrease base metal as much as possible then simply apply Magna 405 following standard procedure and weld pass on pass till reaching desired thickness. The special coating produces a slag which has a light viscosity and allows it to float through the weld to the surface, without causing porosity, and thus be easily removed.

Magna 405 is spatter free and versatile to use and can be applied from any angle.

For Extreme Wear Resistance

After applying Magna 405, machine deposit to shape measurements required. Then play a neutral flame of an oxyacetylene torch over surface. When it reaches a dull cherry red colour, spray a fine jet of water over heated metal. This will increase the surface hardness to the depth of the applied heat, yet still retain its built in resiliency. Even when flame hardened Magna 405 will positively not crack.

Recommended Amperages:

Metric	Inches	Gauge	Setting
3.2 mm.	1/8	10	90-135 amps
4.0 mm.	5/32	8	135-220 amps

Different Applications Using Magna Welding Electrodes:

1. Where greater machinability is required use Magna 305.
2. For extreme impact resistance use Magna 402.
3. For higher abrasion use Magna 403.
4. For gas machinable build ups use Magna 77F.