



Gas Atomized, Martensitic Steel  
Alloy Powder for the  
Laser Cladding Process

# **LaserClad®**

## **41604**



- Excellent resistance to heat, thermal shock and corrosion.
- Crack free coating
- Great machining characteristics
- Excellent welding properties with nice and smooth deposit

# LaserClad® 41604

LC 41604 has been specially developed to meet the metallurgical and physical standards of the laser cladding process.

LC 41604 is an iron based powder with a very fine martensitic structure and an excellent resistance to heat, thermal shock and corrosion. The alloy is work hardening, the hardness can increase up to 53 HRC.

Coatings from LC 41604 have a low crack sensitivity and resistance to tempering up to 650°C. They protect base materials against scaling up to 900°C.

LC 41604 was designed to prolong the service life of a variety of casting equipment in the steel industry. Deposits from LC 41604 are easy to machine.

## TECHNICAL DATA

Typical Values	
Hardness*:	46 HRC
Apparent density:	~ 4.5 g/cm <sup>3</sup>
Melting Range:	~ 1480-1530°C

\*Hardness depends on welding parameters and may vary

Nominal Composition: Cr, Co, Mo, Si, C, Mn

Grain size: 125 / 45 µm

## PROCEDURE FOR USE:

Remove damaged and fatigued areas by disc grinding.

Preheat according to base metal type.

Set welding parameters according to base metal thickness and type.  
Minimum dilution is desired.

Maintain preheat and interpass temperature during welding.  
The degree is dependent on the shape and dimensions of the part and the thickness of the deposit.

Allow work piece to cool slowly.

Please contact your Eutectic Surface Coatings Specialist for more information.

## TYPICAL APPLICATIONS

- Continuous caster and straightener rolls
- Continuous casting guide tables
- Repair of hot forging tools
- Coating of valve seats, sealing joints and fittings
- Buffer layer before coating with Co-based alloys

