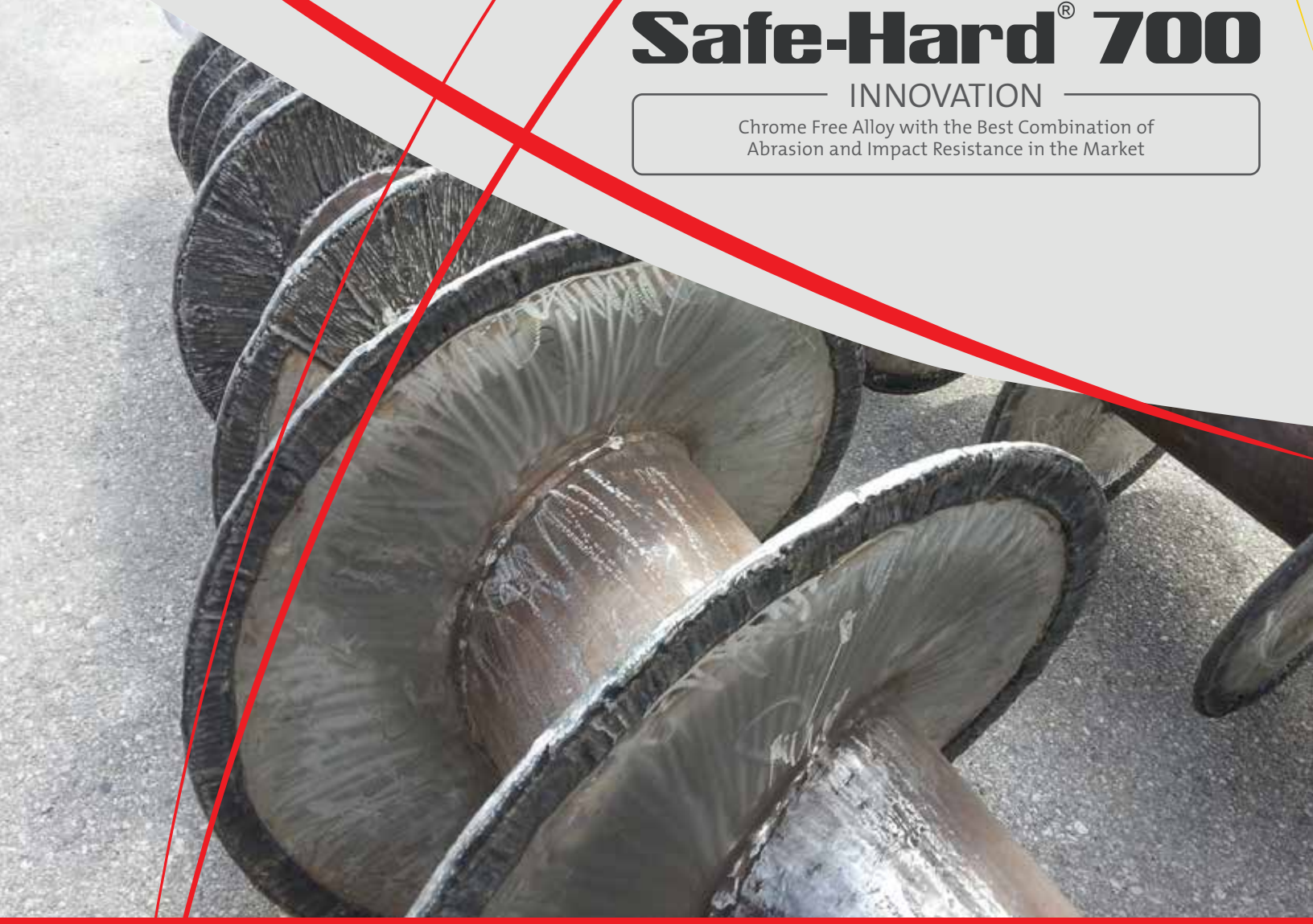
Castolin Eutectic®
Eutectic Castolin

Chrome and Nickel Free Metal Cored Wire

EnDOtec® Safe-Hard® 700

INNOVATION

Chrome Free Alloy with the Best Combination of Abrasion and Impact Resistance in the Market



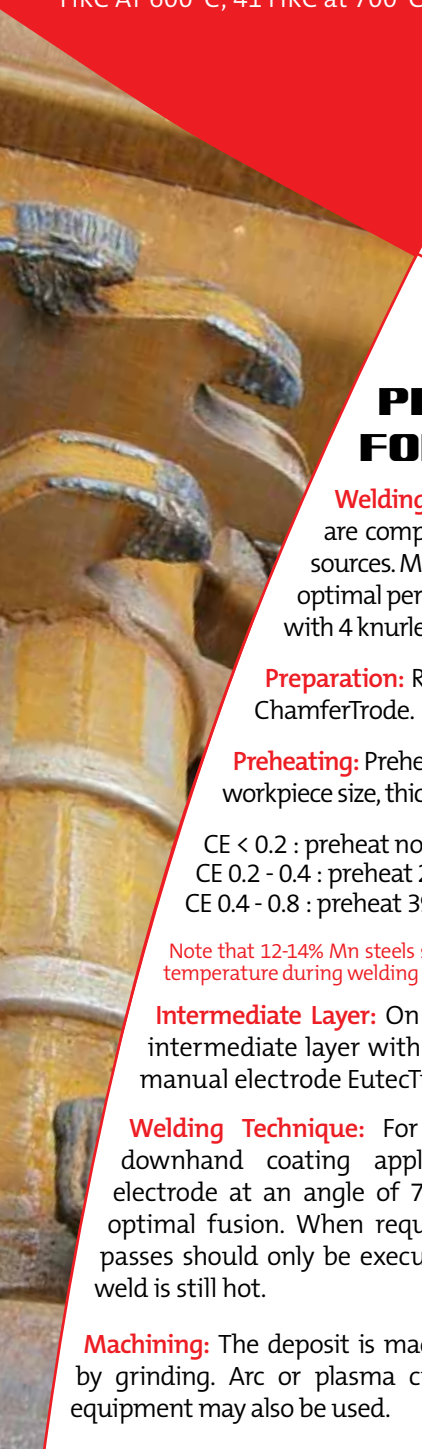
Advanced Alloy in Safety and High-Performance Wear Protection

- Reduced fume emission with ZERO risk of CrVI presence from the wire
- Safer and better performance than all Hypereutectic Chrome Carbide Overlays
- Exceptional resistance to high abrasion combined with impact even at high temperature
- Excellent general weldability and remarkable out of position

Safe-Hard® 700

Gas shielded, metal cored alloy wire, ideal for batch manufacturing or maintenance and repair applications where highest integrity welding, efficiency and productivity are required.

This exclusive alloy is chrome and nickel free and contains complex carbides of tungsten, molybdenum, vanadium, and niobium evenly distributed in a boron hardened matrix. This alloy has exceptional resistance to impact and abrasion, and it keeps its mechanical properties until high temperature (57 HRC AT 600°C; 41 HRC at 700°C).



TECHNICAL DATA

Mechanical Properties (all weld metal)	
Hardness After Welding:	66 HRC
G65-A:	13-20 mm^3
ISO 6947 Welding Positions:	PA, PB, PC, PD, PE, PF, PG
Welding Parameters	DCEP

Shielding Gasses [EN ISO 14175-M21]	
General Recommended:	82% Ar, 15-25% CO_2
Flow Rate:	14-18 L/min
CrVI Emissions:	0 mg/m^3

Diameter (in.)	Arc Voltage (V)	Amperage (A)
0.045”	11 - 32	40 - 250
1/16”	15 - 36	60 - 320

PROCEDURE FOR USE

Welding Equipment: EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Castolin Eutectic recommends using wire drive systems fitted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and worn metal completely with ChamferTrode.

Preheating: Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

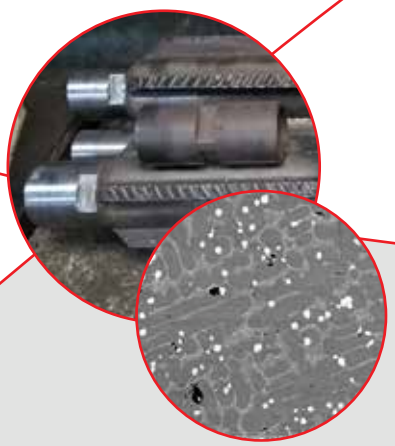
CE < 0.2 : preheat not essential
CE 0.2 - 0.4 : preheat 212-392°F (100-200°C)
CE 0.4 - 0.8 : preheat 392-662°F (200-350°C)

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.

Intermediate Layer: On 12-14% Mn steels, deposit an intermediate layer with EnDOtec DO*02 or with the manual electrode EutecTrode 646XHD.

Welding Technique: For single or multipass, downhand coating applications. Push the electrode at an angle of 70 - 80° to ensure optimal fusion. When required, additional passes should only be executed while the weld is still hot.

Machining: The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.



TYPICAL APPLICATIONS

Designed specifically to provide protective coating against wear caused by abrasion and impact even at high temperature, and galling in industries such as:

Civil engineering
- Gravel pumps
- Rails
- Crusher hammers
- Bucket ripper teeth
- Vehicle tracks
- Soil compactors

Mines and quarries
- Drill heads,
- Breaker plates
- Crusher drums
- Conveyors
- Drag-line buckets

Urban and industrial waste disposal
- Crushers
- Hydraulic compactors
- Grilles/frames of rotary sleeves

Castolin Eutectic® Eutectic Castolin

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9-9-2024