



Premium Open Arc, Wearfacing Wire  
for High Impact, High Compression Loading  
and Abrasion

# **TeroMatec®**

## **0A 3205**



- High deposition rate reduces labor expenses
- Weld deposits are extremely tough and impact resistant
- Can be used to both join and surface 11 - 14% manganese steels

# TeroMatec® OA 3205

TeroMatec® OA 3205 is an austenitic manganese steel for high-volume rebuild and protection of most steel used in mining and construction, including Hadfield Manganese castings and plain carbon steels.

Formulated to resist impact and abrasion equally, OA 3205 shows excellent workhardening properties to offer even better results than other similar rebuilding consumables.

## TECHNICAL DATA

Typical Values	
Hardness as deposited (2 passes):	16-20 HRC
Work Hardened:	45+ HRC
Power Source Type:	Constant voltage and integrated wire drive
Current polarity:	DCEP (DC+)

DIAMETER	AMPS	VOLTS	WIRE STICKOUT
0.045" (1.2mm)	110-190	21-26	3/4"
1/16" (1.6mm)	140-250	23-27	1"
7/64" (2.8mm)	250-350	28-32	2 1/4"

Note: Parameter adjustments will be needed depending on the size, weight, and shape of the part to be welded. For optimum wear resistance keep to the low end of the amperage & voltage ranges.

## PROCEDURE FOR USE

Caution: Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent and smooth wire feeding is a serrated 4-roll drive assembly. Smooth drive rolls are not recommended!

Step 1: Remove all "old" cracked or spalled weld metal down to a sound base.

Step 2: Although TeroMatec OA 3205 has unlimited buildup capabilities a bond coat may be necessary depending on the type of wear severity and total build-up required. If unsure, consult a professional.

Step 3: Preheat the part to be hardfaced depending on its air hardenability and/or carbon level. For most constructional steels a nominal preheat of 150°F (65°C) is suggested and for medium alloy steels, ~250°F (~121°C). Interpass temperatures should be kept below 400°F (200°C). Do not preheat manganese steel castings.

Step 4: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle and use a "pull" technique. For fully automated welding such as hardfacing cement crusher rolls, the wire should exit at about a 10° lagging angle from top dead center. Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion. Note: If welding is interrupted and the part being welded cools to room temperature, make sure to reheat to the original preheat temperature.

Step 5: For hardenable steels slow cooling is advised using silicone blankets, vermiculite, or other environmentally suitable heat-retardant material.

## TYPICAL APPLICATIONS

### APPLICATIONS

Crushers  
Manganese Dragline Chains  
Shovel Boom Heels  
Crusher Jaws  
Gyratory Concaves, Crushers  
Frogs, Crossover Points

### INDUSTRY

Quarries, Cement  
Construction  
Construction  
Quarries, Mining  
Quarries, Mining  
Railroad



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