



All Position Electrode for Build-Up,
Overlay and Joining on Manganese Steel Frogs

ManTrak® 300



- Excellent deposition rate
- Even, crack resistant welds with extremely long service life
- Outstanding corrosion resistance
- Work hardens under normal working conditions

ManTrak 300

ManTrak 300 is an all position electrode for build-up, overlay and joining on manganese steel frogs. It is a smooth running electrode with a high deposition rate that produces even, non-cracking welds with long service life under heavy impact. Deposits have outstanding corrosion resistance and work-harden under normal working conditions.

TECHNICAL DATA

Typical Values	
Hardness:	As Deposited 80-90 HRB Work Hardened 35-40HRC
Tensile Strength:	106,000 psi (731 N/mm ²)
Elongation:	40%
Current polarity:	AC/DC Reverse

DIAMETER	AMPS
5/32" (4.0 mm)	120-160
3/16" (4.8 mm)	140-190

PROCEDURE FOR USE

PREPARATION:

Clean weld area. Remove surface that has been hardened or is not sound. Preheating is not recommended.

TECHNIQUE:

Maintain a medium-short arc keeping it concentrated on the weld deposit to prevent excessive heat build-up in the part. Extra care should be taken to prevent overheating manganese steel because it changes the base metal structure.

"Note: Do not preheat or allow Hadfield manganese steel castings to go above 400°F as this will cause time-temperature embrittlement. Use back-stepping or skip-welding to reduce over-heating"

POST-WELDING:

Peening while still hot helps to shape the part and reduce stresses. Allow to cool slowly.

TYPICAL APPLICATIONS

Repair and build-up of railroad tracks, frogs, and switches. Joining high alloy steel to low alloy or unalloyed steel. Welding steels with high carbon, sulfur, or phosphorus content. Surfacing low alloy and manganese steels. Commonly used for mill, quarry, and gravel plant crushing hammers, rolls, and mantles. Ideal for construction and mining equipment. Often used as an underlayment for more abrasion resistant materials.



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