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(54) **WELDING COMPOSITIONS FOR IMPROVED MECHANICAL PROPERTIES IN THE WELDING OF CAST IRON**

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This patent is subject to a terminal disclaimer.

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(52) **U.S. Cl.**

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See application file for complete search history.

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(57) **ABSTRACT**

A weld deposit produced from a coated welding electrode for use in welding cast irons is provided by the present invention. Preferably, in one form of the present invention, the weld deposit composition comprises between approximately 54% and approximately 60% Nickel, between approximately 3.5% and approximately 5.5% Manganese, and between approximately 0.9% and approximately 1.4% Carbon. The weld deposit is preferably formed by using a coated welding electrode having a coating composition between approximately 0.3% and approximately 4.0% Magnesium and rare earth metals and oxides. The resulting weld deposit exhibits improved ductility, fracture toughness, and resistance to cracking.

**3 Claims, 4 Drawing Sheets**

