

ABSTRACT

SOLID WIRE FOR GAS METAL ARC WELDING

Provided is a solid wire for gas metal arc welding, which has a small amount of fume during welding and is suitable as a welding material for high
5 Mn steel materials. The wire has a chemical composition containing, in mass%, C: 0.2% to 0.8%, Si: 0.15% to 0.90%, Mn: 17.0% to 28.0%, P: 0.03% or less, S: 0.03% or less, Ni: 0.01% to 10.00%, Cr: 0.4% to 4.0%, Mo: 0.01% to 3.50%, B: less than 0.0010%, and N: 0.12% or less, with the balance consisting of Fe and inevitable impurities. It may contain at least one
10 selected from V, Ti, Nb, Cu, Al, Ca and REM, if necessary. The wire has excellent manufacturability, can significantly suppress the amount of fume generated during gas metal arc welding, and can easily manufacture a weld joint having high strength and excellent impact toughness at cryogenic temperatures.