

FLUX CORED WIRE FOR GAS SHIELDED ARC WELDING OF HIGH  
STRENGTH STEEL

ABSTRACT

The present invention provides a flux cored wire for gas shielded arc welding of high-strength steel having proof stress of 690MPa or more, which is capable of all-position welding with a higher efficiency and exhibits an excellent cracking resistance. The flux cored wire comprising a steel sheath, and a flux filled therein, wherein the flux cored wire comprises, by mass% with respect to the total mass of the flux cored wire: C: 0.03 to 0.10%, Si: 0.25 to 0.7%, Mn: 1.0 to 3.0%, Ni: 1.0 to 3.5%, B: 0.001 to 0.015%, Cr: limited to 0.05% or less, and Al: limited to 0.05% or less, and in the flux,  $\text{TiO}_2$ : 2.5 to 7.5%,  $\text{SiO}_2$ : 0.1 to 0.5%,  $\text{ZrO}_2$ : 0.2 to 0.9%, and  $\text{Al}_2\text{O}_3$ : 0.1 to 0.4%; and the remainder comprising: Fe, arc stabilizer, and unavoidable impurities; and wherein the total mount of hydrogen in the flux cored wire is in 15ppm or less.