

ABSTRACT

Title of Invention: TITANIUM OXIDE RAW MATERIAL FOR WELDING MATERIAL

A titanium oxide raw material for a welding material, which can achieve the improvement in a bead shape and high-speed welding. The titanium oxide raw material has the form of particles and has a composition containing 58.0 to 99.0 mass% of TiO_2 , 2.5 mass% or less of Si, 3.0 mass% or less of Al, 5.0 mass% or less of Mn, 35.0 mass% or less of Fe, 5.0 mass% or less of Mg and 2.0 mass% or less of Ca, wherein the surface of each of the particles is coated with an oxide and/or a composite oxide of at least one element selected from Ti, Fe, Mn, Al and Si and the atom percentages of Ti, Fe, Mn, Al, Si and O in the oxide and/or the composite oxide fulfill the following three formulae. $1 = \text{Al} + \text{Si} = 10$, $1 < \text{Ti}/(\text{Fe} + \text{Mn}) = 100$, $\text{O}/(\text{Fe} + \text{Mn}) = 100$

Fig. 1