

ABSTRACT

A heating furnace tube, a method of using the same and a method of manufacturing the same which have been developed with a view to eliminating inconveniences occurring when a carbon-containing fluid is made to flow in the heating furnace tube. The heating furnace tube which comprises a rare earth oxide particle distributed iron alloy containing 17-26 wt.% of Cr and 2-6 wt.% of Al. The method of manufacturing this heating furnace tube which comprises the steps of forming or inserting an insert metal on or into at least one of a joint end portion of one heating furnace tube element and that of the other heating furnace tube element, bringing these two joint end portions into pressure contact with each other directly or via an intermediate member, and diffusion welding the two heating furnace tube elements to each other by heating the insert metal.