

**Development of the Aluminothermic Welding Method
that can Improve Bending Fatigue Strength**

Yoshihiro TERASHITA Ryu-ich YAMAMOTO
Mikihiro IWASAKI Hiroyuki AIZAWA

An aluminothermic welding method was introduced in Japan from Germany in 1979 is the most popular welding process on conventional lines. However, the bending fatigue strength of the aluminothermic welding method is lower than that of other welding methods such as the enclosed arc welding method. For this reason, the application of the aluminothermic welding method on the Shinkansen lines has ever been restricted. On the other hand, the enclosed arc welding method, which is an on-track welding method for the Shinkansen lines, faces issues such as a shortage of engineers. So as to introduce the aluminothermic welding method to the Shinkansen lines, we develop the aluminothermic welding method that can improve bending fatigue strength.