

## **Basic Study on Application of C/C Composite Pantograph Contact Strip to Shinkansen Vehicle**

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Carbon-based materials have been globally used for the pantograph contact strips of high-speed trains. Meanwhile, in Japan, sintered iron materials have been used for the contact strips of Shinkansen vehicles since the start of its service. Carbon-based contact strips are suitable for high-speed trains because of their light weight and high heat resistance. However, since they are low in mechanical strength, fracture toughness and electric conductivity, further investigation is required before applying the carbon strips to Shinkansen vehicles. In this paper, we report the results of the wear tests at a maximum speed of 400 km/h with several different types of carbon strips, and the results of the fracture toughness test. We also discuss some other issues for applying the carbon strip to Shinkansen vehicles.