

## **Improvement of Frictional Property of Cast-Iron Brake Shoes by Combining SiC Filters**

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Alloy cast-iron brake shoes are inferior to the other kinds of brake shoes in frictional force, while are advantageous in terms of constant adhesion and a less degree of attack to wheels. We improved the frictional property of the alloy cast-iron brake shoes by combining filters made of SiC (silicon carbide), which has the effect to increase the frictional force of the cast-iron brake shoes. Because the hardness of SiC is much greater than that of the wheels, the amount of the filters to be used and the position of the filters on the frictional surface were optimized in order the degree of attack to wheels not to increase. We performed full-scale tests and on-track tests of the improved brake shoes, and then confirmed the effect of the filters that improved the frictional property.