

Development of Axle Bearing Rotary Shaft Lip Seal for Speed-up of Shinkansen

Kazuo NAKAMURA Tetsuya HOSOYA Sumiko HIBINO

Masanori HANSAKA Shogo MAMADA Hirofumi YOSHIDA

We produced a trial axle bearing rotary shaft lip seal to suppress outbreaks of flaking (rubber and filler) of a lip contact surface as one of various measures to cope with the speed-up of 350km/h - 400km/h area of the Shinkansen vehicles. As the consequence of the bench test for the high-speed rotation of trial axle bearing rotary shaft lip seal, the characteristics of seal was well maintained after the test duration equivalent to 750,000km in vehicle running distance, and the condition of the seal after the test was also satisfactory. Therefore, it was confirmed that this rotary shaft lip seal has a suitable performance for use in high-speed Shinkansen vehicles.