

For Industrial Machinery/Automotive Products, Fundamental Technology, and New Business Areas



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NTN has been issuing the **NTN** Technical Review, which is a technical information magazine for the general public, every year in the fall. Over the past 15 years, we have featured automotive products and industrial machinery products alternately every other year, as aligned with the Tokyo Motor Show and Japan International Machine Tool Fair (JIMTOF). However, due to the global pandemic caused by COVID-19, many events which attract large groups of people such as the Olympics, have been put off or canceled; including JIMTOF 2020 where we had planned to participate as an exhibitor. As you are aware, tremendous efforts are being made to change the formats of these events to, for example, online exhibitions and webinars, to communicate new information to the public and prevent an economic slowdown.

We have a keen interest to provide information regarding new products and technologies, even under these circumstances, as much and as soon as possible to you. Therefore, we decided to publish our Technical Review No. 88 in a new format, not focusing on specific areas as we once did, but featuring the details of both industrial machinery products, which we exhibited in JIMTOF 2020 Online, and new automotive products, ahead of time, as a special issue of “Industry Machinery/Automotive Products, Fundamental Technology, and New Business Areas.”

From the title you may have an impression that it is a mixture of everything, but we will introduce you to recent progress of rolling bearings and module products for wind turbines, rolling stock, robots and machine tools that we focus on in the industrial machinery area, and discuss the most recent technology of data analysis through sensing and AI algorithms, leveraging the biggest feature of rolling bearings, which is their ubiquitous nature of “being used in each and every product,” as our initiative for advancing IoT. This includes achievements from the “**NTN** Next Generation Research Alliance Laboratory” established in Osaka University in September, 2017.

In the automotive area, one important challenge is how to deal with CASE, which is perceived as a “once-in-a-century transformation.” Specifically, in this issue, we are introducing newly developed products such as: refined rolling bearings for a smaller and lighter form factor contributing to lower fuel consumption and drive shafts, module products which offer new functions and value, as well as the fundamental technologies of rolling bearings which preserve adequate bearing life with new lubricant with lower viscosity that the automotive manufacturers are developing to reduce fuel consumption.

It is always best to see the actual products because “seeing is believing,” however, we hope this magazine will be helpful for you, under the current situation where a real exhibition is impossible due to COVID-19. **NTN** has been working on “DRIVE **NTN** 100,” which is our mid-term management plan with the basic policy of accelerating business transformation for the next 100 years since April, 2018, when we celebrated our 100th year of foundation. We are starting a new mid-term management plan “DRIVE **NTN** 100” Phase 2 in April, 2021. We strive for further development of the industry as a whole, enhancing our R&D activities under our corporate philosophy:

“We shall contribute to international society through creating new technologies and developing new products (For New Technology Network: Networking the World with New Technology).”