

<With business>

Enhancement of product safety

It is our primary responsibility to provide safe and reliable products that customers can use with confidence. Based on our management principle of commitment to quality and reliability, we aim to improve the safety of customer sites with a combination of solutions to optimize operational processes and products that are compatible with these solutions.

Web Improving safety of products and solutions (ESG Databook)

Improvement of product safety: Remotely operated bulldozers at mine sites

Stockpile operation at a mine site is the process of feeding collected ore to the next process (crusher, etc.) while shaping the stockpile of collected ore using a large bulldozer. This operation is important, as it affects the productivity of the mine sites significantly and requires skilled operation on dangerous slopes.

Komatsu developed a system to operate bulldozers remotely, beginning commercial operations at an iron mine site in Brazil in 2023.

The operation of bulldozers from remote locations without direct line-of-sight is affected by time delays in video and other information communications, as well as delays in lever operations. These and other limitations make tasks such as slope forming by remote operations difficult. Our system offers high-speed communications of control signal and a combination of ICT machine control and remote control. In this way, we achieve the same level of performance as crewed operation, even from a remote location more than 2 kilometers away.

In trials at the installation site, the system achieved results exceeding the original goals in terms of safety and productivity. As a result, the mine customer decided to make all large bulldozers purchased in the past year compatible with the control system.

We expect to prepare environments in the future where even unskilled operators can operate this remote system safely.



Remotely operated bulldozer for stockpile operations at a mine site.

Operator training

To ensure that Komatsu products are used safely and properly, we dispatch trainers to customer sites to provide operator training. We also propose efficient operation methods to improve productivity at the sites. We train trainers at group companies and distributors effectively through the use of simulators and offer an operator trainer certification system by level.



Training simulator

Quality assurance system

At Komatsu Group, all divisions from product planning to development, production, sales, and service work together as one team to create safe and creative products. We conduct review and evaluation meetings at each step of development and production, ranging from product planning to the mass-production stage. Through such processes, we evaluate conformity with required quality standards and design new products to achieve specific goals. In this way, our quality assurance activities ensure quality and reliability. Furthermore, we comply with international standards and the laws and regulations of each country, and strive to provide eco-friendly products and services.

Information system for product safety

The Komatsu Group places the highest priority on safety and security in quality assurance activities. We established a system to detect product safety problems promptly in the market and respond appropriately. We also established a system, mainly through the Product Safety Committee, and continue to improve to ensure improvement measures and decisions are properly implemented by employees and top management: 1) analysis and treatment of the causes of accidents, 2) notification to authorities, and 3) recalling products in the market.

Figure: Information system for product safety

