

# SL-1

■ In the modern world, cast products are indispensable. They are used as automobile and machine parts, in construction machinery as well as commodities. I think the casting industry is one of the key industries for manufacturing, and it greatly contributes to the development of the world economy.

■ Currently, its major trading partner is the automobile industry, which is characterized by a constant drive for lighter, more safe, more energy efficient vehicles. This direction in the automobile industry means that the needs for cast products continue to change. To expand the market, the casting industry needs to develop new applications.

■ And, the casting industry historically and currently consumes a large amount of energy. This results in risks and instability, given the rapidly fluctuating energy price changes. In addition to this, discussions surrounding the

sustainable management of carbon dioxide emissions on a global scale has developed. The casting industry should contribute to this discussion for the betterment of both the industry itself and the environment more broadly.

■ Also, the production process has changed greatly in the casting industry because of the development of IT. To produce high quality products, of course, it must utilize new analytical tools in planning, bring further automation to manufacturing, and accumulate and analyze data on both the products and the production process. In addition, additive manufacturing is ready for practical use, not only with resin but with various other materials as well. Utilizing this technology is expected to contribute to the development of value-added products.

■ On the other hand, many developed countries are aging, their birthrates are falling, and young people are increasingly moving away from manufacturing. In the future, it is possible that this move will become a global trend.

■ Taking Japan as an example, this lecture looks at the current situation and issues surrounding the casting industry.