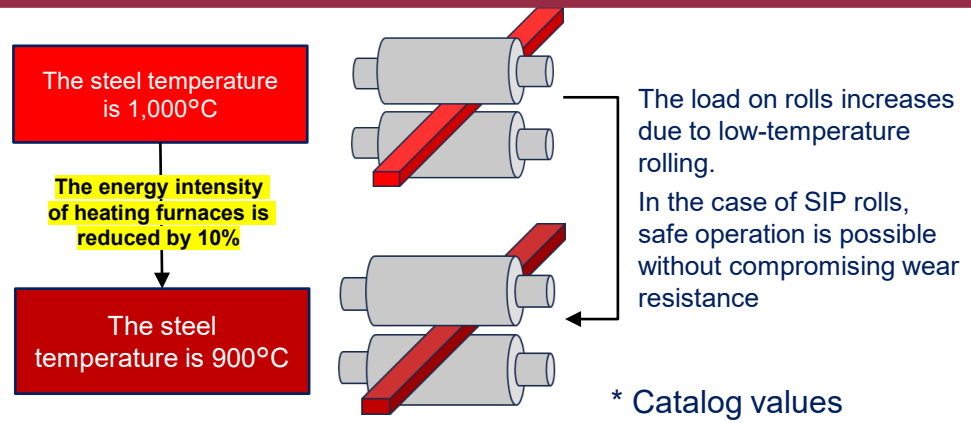
For the Steel Industry
Cast Iron & Steel Rolls “Special heat treatment”

R&D | FS/Demo | **Product/ Service**

Metal Processing Solutions SBU

- At iron works, cast iron & steel rolls are used in the rolling process where steel materials are stretched by applying pressure. Our SIP (**S**umitomo **I**mproved **P**enetration of hardness) rolls are distinguished by our proprietary heat treatment process. This allows them to **withstand higher loads more effectively while maintaining excellent wear resistance**, outperforming conventional products.
- In recent years, as part of energy-saving and carbon neutrality measures, steelmakers have been performing low-temperature rolling by reducing the temperature of heat applied to steel materials so that the energy intensity of heating furnaces can be enhanced. This results in higher loads on rolls.
- Using our SIP rolls allows for **safe operation and maintains productivity** even during low-temperature rolling. **Customers** can improve the energy efficiency of their heating furnaces* **by approximately 10%** with our SIP rolls.

* When the temperature of steel discharged from the furnace is reduced from 1,000°C to 900°C



* Catalog values

Mechanical properties	Conventional product	SIP roll
Hardness (Hs)	45±3	**45/50**
Fatigue strength (N/mm^2)	186	**235**
Fracture toughness (Kic)	185	**203**

Carbon Neutral Contribution points

- ✓ Capable of **withstanding high loads** while **maintaining wear resistance**
- ✓ **Improving the energy intensity of customers’ heating furnaces by approximately 10%**

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