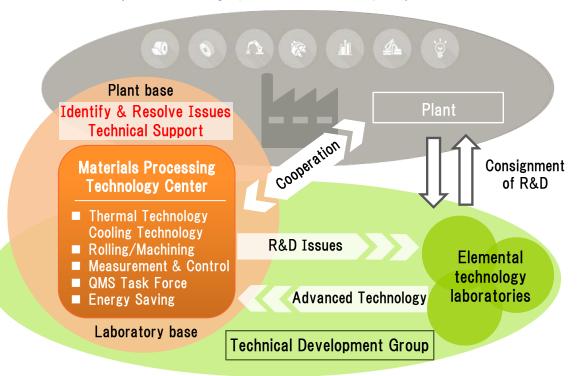
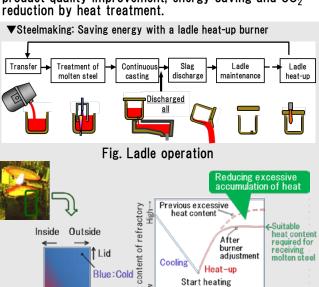
## **Materials Processing Technology Center**

To solve problems that require complex engineering technologies at production sites, we have integrated our expertise and specialized technologies within the KOBELCO Group, and thereby contribute to rapidly resolving process problems. By communicating with all our Group bases, we can develop technologies needed to solve problems related to QMS and 'monozukuri', and provide the necessary support. Our goal is to identify potential or persistent issues through our efforts on-site. We also enhance process technologies, accumulate know-how, and promote human resource development.



## **Energy Saving of Combustion Equipment**

Based on our technologies of high efficient/stable/uniform heating, combustion and cooling, we contribute to product quality improvement, energy saving and  $\mathrm{CO}_2$  reduction by heat treatment.



leat

Energy saving by combustion adjustment

Bottom

Red:Hot

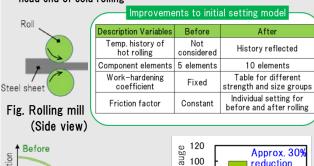
Fig. Simulation of heat

distribution for refractory

## Yield Improvement of Steel Cold Rolling Process

Based on our technology of rolling/machining, we contribute to the improvement of product dimensional accuracy, stable production and yield improvement.

▼Steel sheet: Improving the accuracy of thickness setting at the head end of cold rolling



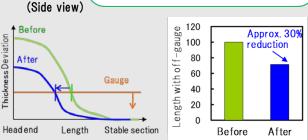


Fig. Behavior of thickness Fig at the head end (10

Fig. Length with off-gauge (100 for the length before improvement)

Reducing the thickness deviation at the head end by improving the initial setting model

Long

Time after the all molten steel discharged

Fig. Thermal simulation of

refractory for ladle heat-up