

*Abstract:*

With increasing demand for tinfoil and chrome sheets foreseen in China and Southeast Asia, No.

Regarding the division of functions, while performing line tracking, the Level-2 computer also performs setting of the PLC and distributed control system (DCS) based on coil information and operating conditions from the Level-3 computer (business computer) . Setting of the line speed to the PLC is performed in the plant optimal control system. The details of this system are explained in Chapter 3.



temperature from the upper/lower limits due to furnace temperature response delay.

Application of the plant optimal control system began in June 2012. The application rate of the plant optimal control system in June 2012 was 85.8%, and an application rate of 92.2% was achieved in next month. Excluding emergency trouble and other cases in which human intervention is essential, automatic operation is performed at all times. Because the line speed is set in accordance with the setting values of the Level-2 computer during automatic operation, deviations in line speed setting depending on individuals have been eliminated, and this has contributed to quality stability. Feed-forward control of strip temperature has also made it possible to prevent deviations of strip temperature from the upper and lower limits in unsteady parts.

and show the average line speed before and after application of the plant optimal control system. A comparison of the application rate by steel grade and strip thickness showed that increases in line speed were achieved in all cases after application. In particular, a remarkable increase in the average line speed could be seen with Grade-A coils, which have strip thicknesses of less than 0.24