D-SP02 Proecss Control and Automation 4

13:00-15:00 **Chair : Lee Dukman (POSCO)**
Room : 4128 **Co-Chair : Won Sang Chul (POSTECH)**

13:00 – 13:20 **D-SP02-1**

Introduction of Automation and Control Issues for Hot Rolling Mill Processes

Duk-Man Lee (POSCO)

This paper handles main automation facilities and important control issues for hot rolling mill processes. Starting from the general procedures of production cycle, detailed tension control applications are handled based on field experiences and published research papers. Nowadays, quality control and delivery time control for products is becoming more and more important as the client demand is tighter than any other period. In this respect, control technology in steel making process takes very important position. Therefore, the objective of this paper is to share control problems with the people in academic field and by doing so, to get new and striking solution for the problems.

13:20 – 13:40 **D-SP02-2**

Development of The New Shape Control Algorithm with The Strip Thickness Decoupling in Hot Strip Mill

Dukbum Shin, Jongcheol Kim, Sangchul Won
(GSIST, POSTECH)

The strip profile and shape control is one of the most important technologies in Hot Rolling Mill System. Because the unbalance of strip's shape and wave appearance between stands has a bad effect on Hot Rolling Mill System by making the inferior thickness, strip's damage and so forth in factories. Many competition Plate Mill introduced shape control system, for example, pair cross-mill, work roll bender, which includes shape measuring instruments and shape control mathematical models. Shape meter, which is equipped for flatness, only does feedback control at the top of coil. And, for crown, we depend on initial setup value and there is no feedback control. Therefore we predict the shape of strip using rolling pressure, bender force and tension of inter-stand in ...

13:40 – 14:00 **D-SP02-3**

The Control System Development of Crop Cutting in Hot Strip Mill.

Lee Sang-Ho, H.M. Bae
(POSCO)

A control system for crop cutting in Hot strip Mill is developed. The development system is composed of three sub-systems. one is crop shape system which captures the shapes of the strip's head and tail using the area CCD camera. Another is Laser Speed System which measures the speed and length of strip. and, the other is control system which controls the optimal cutting length and crop shear motor. As a result, with a develped system we can reduce crop loss considerably.