

# TM01

## Poster Session

09:00 – 11:00

Chair1 : Jinyoung Kim ( Tongmyong Univ., Korea )

Room : Base 2nd Floor-Zillertal

Chair2 :

TM01-19

### Modularization of Stocker for 300mm Wafer Fabrication AMHS

Chanhee Han, Jinki Kim, Hakkyung Sung  
(Samsung Electronics Co. Ltd., KOREA)

- Introduction
- Constitution and equipment of AMHS
- Discussion about using Stocker
- Ahead developed 300mm stockers
- 300mm Stocker Solution - Modular Stocker
- Conclusion

TM01-20

### A new color management approach for dye manufacturing process with image processing and intelligent algorithm

Kyungwon Jang, Taechon Ahn(Wonkwang Univ., KOREA),  
Dongyoon Lee(Joongbu Univ., KOREA), Yangwoong Yoon,  
Jinhyun Kang(Wonkwang Univ., KOREA)

A dye process of textile industry is important part that finally gives required quality to the textile material. To produce a proper dye for the customers, color management that precise color measurement from original color sample and rapid estimation of corresponding color recipe is most essential. In the practical dye manufacturing process, color management falls into two categories. First one is color management with an expert knowledge of colorist, the other one is computer aided way. In the former management way, color management fully depends on colorists' expert without support of the measurement and computational devices. Objective color management is impossible in this way. The ...

TM01-21

### Application of the Vision Sensor for Weld Seam Tracking System in Large Vessel Fabrication

Sang Gu Choi, Jee Hyung Lee, Sang Hyun Ryu  
(Hyundai Heavy Industries Co. Ltd., KOREA)

For the weld quality improvement and the convenient operation of machines, laser vision system can be used to track weld seams on pressure vessels. There are many bad conditions to the weld grooves such as cutting error, gap variation of weld joint, and offset error of center line caused by misalignment.

We developed a laser vision seam tracking system which consists of a laser vision sensor, a two axis positioning mechanism and a user interface program running on the Windows system. It was found that our system worked well for U, V and X shaped grooves. We used an industrial PC as the system controller to secure immunity to electrical noise and dust. We introduce here a simple and...

TM01-22

### Web-based Remote Monitoring and Control of HVAC Systems on LonWorks

Jae-Won Yang, Il-Joo Shim, Gwi-Tae Park(Korea Univ., KOREA)

1. Introduction
2. LonWorks
3. Experiment
4. Conclusion

TM01-23

### Feedback Linearization for the Looper System of Hot Strip Mills

I Cheol Hwang(Dongueui Univ., KOREA), Seong Bae Kim(Dongueui Univ., KOREAV)

This paper studies on the feedback linearization of the looper system for hot strip mills, where the looper system plays an important role in regulating the strip tension. Firstly, nonlinear dynamic equations of the looper system are simply introduced. Secondly, using the static feedback linearization algorithm, a linear model of the looper system is obtained, of which usefulness is validated from comparison between the linear model and the nonlinear model, and design of LQI(Linear Quadratic Integral optimal control) and ILQ (Inverse Linear Quadratic optimal control) looper control systems. In result, it is shown that the linear looper model by the feedback linearization well describes nonlin...

TM01-24

### Scheduling model for processes with both batch and continuous operations

Jeonghwa Hwang, Min-gu Kang(KAIST, KOREA), Sungdeuk Moon(Hanmetal Tech. Co. Ltd., KOREA), Jong-gu Lee, Ho-kyung Lee(LG Chem Ltd., KOREA), Sunwon Park(KAIST, KOREA)

1. Introduction
  2. Process description
    - 2.1 Process description
    - 2.2 Assumption
  3. Mathematical model
    - 3.1 MILP model for continuous part
    - 3.2 LP model for batch part
  4. Examples and Results
  5. Conclusion
- Acknowledgement  
Reference