



INTERNATIONAL INSTITUTE OF WELDING
A world of joining experience

Doc.XII-2556-2022

IIW Annual Assembly 2022
Tokyo, Japan and On-line

Draft Agenda of
Intelligent Manufacturing Symposium
July19, 2022

Palais Royal D Room

Tuesday 19 July 2022, 14:00 – 18:00

1. Opening by Dr. Stephan EGERLAND, Chairman of the Technical Management Board,
Prof.Satoru ASAI, Chairman of Comm.XII
2. Agenda
3. Presentation of documents

Session1 (Session chairman :Prof.S.Asai , Chairman of Comm.XII)

- [1] TOWARD INTELLIGENT WELDING BY BUILDING ITS DIGITAL TWIN
Qiyue Wang, Wenhua Jiao and YuMing Zhang (USA)
Doc. XII-2534-2022
- [2] Stabilization of welding process using Cyber-Physical System
K. Takeya, T. Sakai, R. Noda, Y. Shiomi, T. Washitani, M. Kikawada, S. Kudo, M. Hirono
and M. Sasaki (Japan)
Doc.XII-2537-2022
- [3] Connected, digitalized Wire Arc Additive Manufacturing — Utilizing Data in the Internet of
Production to enable Industrie 4.0
U.Reisgen, S.Mann, J.Pennekamp, M. Ay, M.Behery, L.Oster, B. Ebert, R.Sharma,
K.Wehrle, D.Abel and G.Lakemeyer (Germany)
Doc.XII-2540-2022
- [4] Automation Technology for One Side Welding with Ceramic Backing
Using Weld Pool Image Recognition
Tatsuya Yoshimoto (Japan)
Doc.XII- 2539-2022

Coffee break

Session2 (Session chairman: Dr.Hermans, Vice-chairman of Comm.XII)

- [5] Weld Depth Estimation and Its Visualization of Judgement Basis by CNN Model through Molten Pool Monitoring in GMAW
Wataru TANAHARA, Takumi MATSUMURA , Kazufumi NOMURA , Tomokazu SANO , and Satoru ASAI (Japan)
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- [6] Determination of weld geometry parameter and stress concentration distributions for butt joints using deep neural networks
Moritz Braun, Josef Neuhäusler, Martin Denk, Finn Renken and Leon Kellner , Jan Schubnell , Matthias Jung , Klemens Rother and Sören Ehlers (Germany)
Doc. XII-2535-2022
- [7] Digitization of welders' skills by motion sensing towards welding automation
Seung Hwan C. PARK, Akihide TANAKA , Isamu TAKAHASHI, Masanori MIYAGI, Naoya OKIZAKI, Kazutoshi Sugie and Makoto Ogata (Japan)
Doc.XII-2538-2022
- [8] Welding skill education using digital welding helmet with wide-field visualization technology
T. Tsuyama, N. Kanehira ,A. Hayashi K. Nagasawa and H. Miyashita (Japan)
Doc.XII-2536-2022
- [9] Economic and Environmental impact of Welding Training Digitalization by using Augmented Reality Solutions
Antonio Claveria and Antonio Fernandez (Spain)
Doc.XII- 2542-2022

4. Closing by Mr. Robert SHAW, Chairman of WG-TWU