



INTERNATIONAL INSTITUTE OF WELDING
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Doc.XII-2453-2020

IIW Annual Assembly 2020

Agenda Commission XII "Arc Welding Processes and Production Systems" July24 -25, 2020 ON-LINE

Friday 24 July 2020, 13:00 – 16:00 CEST @ Session 4

1. Opening : **Live [Satoru Asai, Chairman of C-XII]**
2. Agenda : **Live [Satoru Asai, Chairman of C-XII]**
3. Minutes of previous meeting : **Live [Satoru Asai, Chairman of C-XII]**
4. Presentation of documents:
 - [1] 13:15-13:35 **VIDEO**
Welding wire as a distance sensor by reversing movement of the electrode
[Kruglhuber W.](#), Schörghuber M., Binder M. (Austria)
Doc. XII-2440-2020
 - [2] 13:35-13:55 **VIDEO**
Study on welding phenomena observation method in visible and infrared wavelength region with quantitative image analysis
[K.Kasano](#), Y.Ogino, S.Fukumoto, T.Sano, S.Asai (Japan)
Doc.XII-2451-2020
 - [3] 13:55-14:15 **VIDEO**
Study on the weld penetration estimation by deep learning model with molten pool monitoring in GMA arc welding
K.Nomura, K.Fukushima, [T.Matsumura](#), S.Asai(Japan)
Doc. XII-2448-2020

Coffee Break (14:15– 14:30)

- [4] 14:30-14:50 **VIDEO**
Single Pass Full Penetration Welding for Stainless Steel Using High Current GMAW
[H.Baba](#), K.Kadota, T.Era, T.Ueyama, M.Maeshima, K.Kadoi, H.Inoue, M.Tanaka (Japan)
Doc. XII-2450-2020
- [5] 14:50-15:10 **VIDEO**
Increasing productivity by two-TIG arc mixed with activating oxygen

[X.Wang](#), L.Chia, Y.Luo, H.Xu, D.Fan(China)
Doc. XII- 2447-2020

- [6] 15:10-15:30 **VIDEO**
Research and Development of a Novel Welding technology for joining Ultra-thin sheet applying in Metal forming fields
[A.N.Van](#), A.Murata, S.Tashiro, M.N. Huu, M.Tanaka (Vietnam)
Doc. XII-2348-19

15:30-15:45 VIDEO
(Visit from the WitW Editors and the IIW Secretariat)

Saturday 25 July 2020, 13:00 – 16:00 CEST @ Session 4

- [7] 13:00-13:20 **VIDEO**
Influence of droplet transfer behaviour on the microstructure, mechanical properties and corrosion resistance of wire arc additively manufactured Inconel (IN) 625 components
R.Kishore M, S.Seman, R. Jayaganthan, [M.Amirthalingam](#) (India)
Doc. XII- 2441-2020
- [8] 13:20-13:40 **VIDEO**
Alloy elements transportation mechanisms in plasma arc additive manufacturing of a γ -TiAl alloy
[D.Wu](#), C.Shen, L.Wang, X.Hua, N.Ma, S.Tashiro, M.Tanaka (China)
Doc. XII- 2443-2020
- [9] 13:40-14:00 **VIDEO**
Fundamental study for the quality measurement for wire arc additive manufacturing process by laser ultrasonic technique
[K.Nomura](#), T.Matsuida, S.Otaki, S.Asai (Japan)
Doc. XII- 2449-2020
- [10] 14:00-14:20 **VIDEO**
Application of the Wire-Arc Additive Manufacturing Process for In-situ Alloying of Intermetallic Compounds: Present Development and Future Prospects
[C. Shen](#), X.Hua, F. Li, Y.Zhang (China)
Doc. XII- 2454-2020

Coffee Break (14:20– 14:35)

- [11] 14:35-14:55 **LIVE**
Monitoring and Control in MIG WAAM of Magnesium
[S.F. Goecke](#), G.F.Gottschalk, D.Lubosch, S.Baum, G.Fischer (Germany)
Doc. XII- 2452-2020
- [12] 14:55-15:15 **VIDEO**
Visualization of the welder's skill in manual TIG welding process by numerical simulation
[Y. Ogino](#), K. Imai, S. Asai, Y. Tsujimura, S. Nakamura, T. Ogawa (Japan)
Doc. XII- 2446-2020
- [13] 15:15-15:35 **VIDEO**
Numerical Simulation of the Behavior of Hydrogen Source in a Novel Welding Process to Reduce Diffusible Hydrogen
[S.Tashiro](#), N.Mukai, Y.Inoue, A.B. Murphy, T.Suga, M.Tanaka(Japan)
Doc. XII- 2444-2020
- [14] 15:35-15:55 **VIDEO**
Effect of Current Waveform on Mechanical Characteristics and Intermetallics Formation of

5. Recommendation of submission to IIW Journal “Welding in the World”
: Live [Satoru Asai, Chairman of C-XII]
6. Miscellaneous : Live [Satoru Asai, Chairman of C-XII]
7. Date and place of next meeting : Live [Satoru Asai, Chairman of C-XII]
8. Closure : Live [Satoru Asai, Chairman of C-XII]