

IIW/Comm XII/Bucharest 2003

AG 45 möte 02-10-01

- Commission XII
"Arc Welding Processes and Production Systems"
- Chairman B Lucas
 - ⇒ XIIA Metallurgy
 - ⇒ XIIB Processes H Hackl
 - ⇒ XIIC Production System Y Sugitani
 - ⇒ XIID Enviroment, H&S H W Ludewik
 - ⇒ XIIE Quality Assurance D Rehfeldt
- Joint Comm IV and Comm XII Workshop
 - ⇒ "Arc and Laser Brazing Workshop"
 - Chairman D Yapp



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XIIA Metallurgy

- Curent usage and future trends of welding materials
- Welding consumables for high strength steels in Japan
- Classification of welding methods in terms of oxygen and nitrogen in weld metal



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XIIA Metallurgy

- Current Usage and Future Trends of Welding Materials
 - * IIW Questionnaire
 - * Antal svar
 - Europe
 - UK 20
 - Slovakien 19
 - Rumänien 11
 - Slovenien 10
 - Sverige 8
 - Kroatien 8
 - Polen 8
 - Finland 3
 - Österrike 3
 - Nordamerika
 - Kanada 24
 - USA 16
 - Japan 202
 - Totalt 334



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XIIA Metallurgy

- MMA fortsätter att minska
- Rörelektroder ökar (ffa metallpulverfyllda)
 - * Förbättringar som krävs på homogentrådar
 - Mindre sprut
 - Strängutseende
 - Porsäkerhet
 - * Förbättringar som krävs på rörelektroder
 - Mindre sprut
 - Mindre rök
 - Porsäkerhet
 - Användbar i multi-wire system
 - * Förbättringar på MMA
 - Mindre fuktupptagning
 - Lägre hydrogen
 - Bättre mekaniska egenskaper
 - Mindre rök
 - * Förbättringar på SAW
 - Bättre slagglossning



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XIIA Metallurgy

- Consumables for HT 780 ("T1" type) och HT 950 stål
 - * Ultra låg hydrogen
 - * Ni tillsats
 - * Ti addition
 - * O < 200 ppm



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XIIB Processes H Hackl

- High speed - Tandem pulsed GMAW
- 2-Wire Electro Gas Arc Welding
- Underwater GTAW - Activating FCW
- Adaptive Control
 - * V-joint utan backing plåt
 - * NG Robotic welding
- Review of Metal Transfer Classification



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Arc and Laser Brazing workshop D Yapp

- State of the Art on Laser Hybrid Welding and Laser Brazing
- Development of Laser Brazing of Fe-base Superalloy using Ag-Pd Filler metal
- Dissimilar joining of Al to Steel by Lap Joint MIG Arc Brazing using Flux Cored Wire
- Variable Polarity (AC) Arc Weld Brazing of Galvanized Sheet
- GMA Brazing on Zn-galvanized steel sheets



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Production Systems Y Sugitani

- Survey of cutting processes - Japan
- Robotics in Shipyard
- Underwater Cutting Technology - Offshore
- Automatic GTAW Technology - NG - Visual Sensors
- High Efficiency Twin-Arc TIG welding Method (SEDAR-TIG) for PC LNG Storage Tanks



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Environment, health & Safety

H W Ludewig

- Underwater Engineering
- The Welder as a Strategic Resource in Shipbuilding

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Quality Assurance in Arc welding

D Rehfeldt

- Ultr-Narrow Gap GMAW - Numerical Simulation System
- Dimensions and Shape Calculation of Molten Weld Pool Crater
- Atlas of MIG/MAG Welding Metal Transfer Modes
- Short-Circuiting Transfer - High Speed Oscillating MAG - Mathematical Model
- Transport of the Wire in MIG/MAG welding - Especially Friction

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Comm XII/Bucharest 2003

- Nästa mellanmöte
 - * TWI / Cranfield 2004
- Annual Assembly 2004
 - * Osaka juli
 - Workshop - Activated flux
 - High Productivity Welding Processes included New Welding Processes
 - Laser Hybrid
 - FSW
 - A-TIG

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