TCR ADVANCED

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WELDING METALLURGICAL ANALYSIS WITH THE WRC-1992 DIAGRAM

Evolve by TCR

215, Pancham Icon, Vasna Road, near D-Mart, Vadodara, Gujarat 390007

Fees: INR 5,000/- for single person + GST 18% extra.

10% Discount on total amount of invoice for 03 or more nominations from the same organization.

12th October 2024

Course Content

- Key metallurgical phases in welds ferrite, austenite, martensite, etc and their role.
- Importance of understanding microstructural changes during welding.
- Role of cooling rates and thermal cycles in phase transformations.
- Concept of dilution, ways to minimize dilution level.
- History and development of the predictive diagram.
- Qualitative and quantitative methods of weld metal ferrite measurements.
- Practical session: using the Schaeffler and WRC-1992 diagram.
- Step-by-step guide to predicting microstructural changes using the diagram.
- Case studies with different welding process consumables and dilution scenarios.
- Application of the Schaeffler and WRC-1992 diagram in dissimilar metal welding.
- Troubleshooting common welding defects and issues using metallurgical analysis.
- Open forum for questions and doubt clarifications.

Who should attend

- Welding Professionals,
- QA/QC personnel,
- Welding aspirant, Graduate,
- Post-graduate

Objective

- 1. Understand welding metallurgy principles and the impact of microstructural changes.
- 2. Learn predictive and experimental methods for measuring weld metal ferrite in austenitic and duplex alloys.
- 3. Master the use of Schaeffler and WRC-1992 Diagrams to predict microstructural changes in welded materials.
- 4. Identify common welding defects and prevent them using metallurgical analysis techniques.

About Faculties

Mr. M. N. Patel, Ex. Associate Professor Metallurgy & Materials Engg Dept.

Education: BE & ME in Metallurgy.
Experience: Has 33 years of teaching experience in UG and PG level in subjects like Plastic Deformation of Metals, Mechanical Metallurgy, NDT and Failure Analysis, Mechanical behavior of materials, Selection of Materials and Failure Analysis, Physical Metallurgy and Welding Metallurgy.
Expertise: In physical metallurgy, micro structural analysis, scanning electron microscopy, welding metallurgy, failure analysis.

Subject Matter Expert (Another Faculty)

Education: ME in Metallurgy Engineering, PhD in Welding Technology.
Experience: 15+ Years of experience in welding consumable testing, consumable selection for similar-dissimilar metals.
Expertise: Welding Processes, Metallurgy, expert in delivering professional training on welding codes ASME SEC VIII Div 1, ASME-IX, BS EN ISO Welding Qualifications WPS-PQR-WPQ.

Mr. Kamlesh Rana, Technical Manager, TCR Advanced

Education: Diploma in Mechanical Engineering.
Experience: 38 years of in QA /QC department of fabrication industry, fitting & Forging manufacturing.
Expertise: ASME Code Specification, specifically Sec IX. VIII, II A,B,C. AWS qualified welding Engg. API Qualified Internal Auditor. ASNT level 2 RT , UT, PT, MPI.

Subject Matter Expert (Another Faculty)

Education: PhD in Metallurgy Engineering, International Welding Technologist (IWT),
Experience: 12+ Years of experience in Welding Training.
Expertise: Welding Metallurgy of Stainless Steels, dissimilar metal welding, expert in delivering professional training on welding codes ASME SEC VIII Div 1, ASME-IX, BS EN ISO 15614-1, ISO 9606-1, ISO 14732, AWS D1.1, Welding Qualifications WPS-PQR-WPQ.

Payment Details

For NFET/ RTGS/ Bank transfer:
Account No: 05730400000034
IFSC: BARBOINDMAK (5th letter is zero)
Bank: BOB, Makarpura Branch
Merchant Name : TCR ADVANCED ENGINEERING PVT LTD
UPI ID : tcrad93762@barodampay

QR code for payment

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