Welding, NDT & EPFP for Structural Steel Buildings
(4 hours Lecture)

- Introduction to NDT principles
- Understand fundamental welding principles and processes
- Minimum requirements of the fabricators
- Welding procedure Qualification WPS, Procedure Qualification records PQR
- Welders Performance Tests WPT and Competency
- Regulatory frameworks and standards
- Introduction to NDT (Non-Destructive Testing) Principles
- Main NDT Methods
    - Visual Testing
    - Magnetic particles Testing MPT
    - Ultrasonic Testing UT
    - Penetrant Testing PT
    - Radiographic Testing RT
    - Advance NDT Methods
- Documentation and reporting
- Fire dynamics and steel behaviour
- Types of PFP coatings
    - Intumescent coatings
    - Cementitious coatings
    - Board systems
- Application requirements
    - Surface preparation
    - Environmental conditions
    - Application methods
- Implementation & Quality Control
- Fire rating calculations
- Application verification methods
- inspection & Certification protocols
- Case studies and failure analysis
- Questions and answers.

The presenter in Brief:

The lecture will be presented by:
Mr. Elraie F. Stefan
Technical Director & Head of Inspection
TÜV AUSTRIA Group

With over two decades of distinguished experience in structural steel inspection and assessment, our speaker has established himself as a leading authority in Non-Destructive Testing and Passive Fire Protection across the Mediterranean and Middle East regions.

In his current role at TÜV AUSTRIA Group, he leads complex inspection programs and oversees quality assurance frameworks for major structural steel projects. His expertise spans comprehensive NDT methodologies and advanced fire protection systems, supported by the highest level of international certifications from prestigious institutions including the Institute of Mechanical Engineers (UK) and the Institute of Corrosion Engineering (UK).
Mr. Elraie holds Senior level III in NDT and Senior Level III in EPFP as well as many other qualifications in Welding inspection, Coatings, LPG, Plants and Industrial & Technical Engineering facilities.

His project portfolio encompasses numerous landmark developments across multiple countries, including large-scale structural installations in Cyprus, Greece, Qatar, Dubai, Albania, Egypt, and Jordan.
This diverse international experience has provided him with unique insights into varying regional requirements, standards, and implementation challenges.

As a Senior Lecturer at TÜV AUSTRIA Hellas Academy in Greece, he actively contributes to developing the next generation of inspection professionals, sharing practical knowledge gained from real-world applications and complex project scenarios.

His approach combines rigorous technical expertise with practical field experience, offering participants valuable insights into both theoretical frameworks and real-world implementation challenges in structural steel inspection and fire protection.
This session draws from his extensive experience in mega-scale projects, providing attendees with actionable knowledge and practical understanding of current industry best practices.