Philippe Corroyez

Materials Science Engineer – Welding engineer

Chairman of the Standardization Commission UNM CNS Conso : “Welding – Consumables”
Professor at EAPS and ESSA, graduate Schools of specialization in Welding

Profile

59 years old
Seniority: 5 years
English

Physico-chemistry of materials – Physical metallurgy – Applied metallurgy

Materials integrity

Fracture mechanics – Material Fatigue

Corrosion

Materials forming processes

Weldability and Welding of Materials

Education

Materials Science Engineer-EUDIL
Polytech Lille

MAS (Master of Advanced Studies) in Materials Science
Lille

European and International Welding Engineer – AFS
Paris

Pressure vessels codes RCC-M and ASME BPVC

Solidification

Professional background

LINCOLN ELECTRIC EUROPE

Key Segment Manager in nuclear, thermal and hydraulic power generation
TCL International Expert

AIR LIQUIDE WELDING France

TCL International Expert
Key Segment Manager in nuclear, thermal and hydraulic power generation
Project manager for Special Orders – Power Generation
Product Manager – Technical expert – Consumables & Metallurgy expert

MANOIR INDUSTRIES

Metallurgist Engineer – Head of welding – Head of the laboratory – Head of R&D metallurgy and welding – Heavy walled thicknesses casting parts for power generation sector – Casting parts for railway industry.

UNIVERSITE OF LILLE

Researcher at Laboratory of Physical Metallurgy of Lille I: Galvanization – Mechanical alloying from powders and gases.

Philippe Corroyez

Materials Science Engineer – Welding engineer

Key areas of expertise

Stress cracking, fracture, instability of structures, corrosion

- Fatigue and cracking of hydraulic runners
- Welding cracking on large stainless steel pump casing
- Cracking of welded structures
- Brutal cracking during hydraulic pressure test of HYSS (high yield strength steels)
- Reversible Temper Embrittlement on HYSS welded joints
- Distortion and rupture of cooling cylinders
- Cracking and corrosion of iced water pipes for air conditioning systems
- Reheat cracks in large pressure vessels parts for the petrochemical industry
- Rail derailments – switch instabilities
- Tower Crane falls

Design and process flaws

- Design and process flaws on railway equipment
- Rail damage by rolling contact fatigue Wheel – Rail
- Design flaws on welded cooling cylinders

Metallurgy

- Cold cracking phenomena (welded joints and parent materials)
- Hot cracking of welded joints
- Reheat cracking phenomena on CrMoV steels with high thicknesses, for petrochemical applications
- Major chemical Segregations phenomena on high-thicknesses stainless steels castings – subsequent weldability
- Micro cracks on welded joints after post weld heat treatment
- Damages by creep and cracking of advanced 9%Cr creep resistant steels for components of Ultra Super Critical boilers.