Mason Chegini

Metallurgist Specialist

Highlights of Qualification

- Strong educational background: B.A.Sc. and M.A.Sc. in Materials Science; Ph.D. candidate in Mechanical Engineering
- Certifications: ISO 9001, Project Management Foundation (PMI), Non-Destructive Testing (ASNT certified: PT, MT, UT, and RT), Operational Excellence (PMI), and completed Six Sigma courses (Green belt).
- Software: SAP, Microsoft Project, Advanced Excel, Origin Pro

Education

McMaster University (Ph.D.)

Relevant Work Experience

Research Assistant in Machining

McMaster Manufacturing Research Institute

• Studied material behavior in UHSM of Inconel 718 and H13, identifying optimal cutting conditions for surface quality and residual stress, and discovering a force window with significantly lower cutting forces than conventional machining.

Research Assistant in Thermo-Mechanical Processing

SRTTU University

• Discovered a new recrystallization trend in pure zinc under high strain, leading to improved mechanical properties for implant parts.

Research Assistant in Microstructure Engineering

Materials Processing Simulation Laboratory

- Studied the effect of carbon and nickel on 410 martensitic stainless steel, identifying the optimal hot deformation regime and developing a model to predict stress and strain at any conditions.
- Investigated the effect of pre-strain on AISI 414 martensitic stainless steel, identifying its influence on thermomechanical properties and determining optimal hot deformation conditions through hot compression testing.
- Evaluated deformation inhomogeneity during hot radial-axial ring rolling of AISI 420 stainless steel by simulating the process and analyzing the resulting microstructure.

Research Assistant in Severe Plastic Deformation (SPD) and Tribology

IKIU University

• Evaluated deformation inhomogeneity during hot radial-axial ring rolling of AISI 420 stainless steel through process simulation and microstructural analysis.

Other Work Experience

Supervisor/Invigilator

Xyna International, Hamilton, Ontario, Canada

Supervised IELTS exams, ensuring strict adherence to procedures and biometric data for approximately 80 students per week.

 $Sept \ 2021-Present$

Sept 2021 – Expected: June 2025

Sept 2014 – Sept 2020

Sept 2020 - Sept 2021

Sept 2010 – Sept 2014

Sept 2022 - Current

• Hamilton, ON

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