



Submittal #012:

**GFRP Bars as an Internal Reinforcement to Concrete: Advantages,
Misconceptions & Effect on Green House Gas Emission**

Abstract:

This presentation will explore the use of Glass Fiber Reinforced Polymer (GFRP) bars as an internal reinforcement in concrete structures. GFRP bars offer several advantages over traditional steel reinforcement, including higher corrosion resistance, lighter weight, and better durability. There are several misconceptions such as lack of ductility, fire safety, cold temperature and real-life performance of GFRP bars exist and in this presentation, we will be explaining how those misconceptions have been addressed by advancement of the industry. Additionally, the use of GFRP bars can significantly reduce greenhouse gas emissions associated with the production, service life and transportation of steel reinforcement. The presentation will discuss recent advancements in GFRP material technology and their potential benefits for concrete construction, as well as the environmental benefits of using GFRP bars as an alternative to steel reinforcement. Case studies and examples of successful GFRP-reinforced concrete projects will also be presented. Overall, this presentation will provide valuable insights for engineers, contractors, and researchers interested in sustainable and innovative construction practices.

Speaker:

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Bio:

Borna Hajimiragha is an engineer and CEO in the fiberglass reinforcement industry for almost 15 years. His Masters Degree in Mechanical Engineering, specializing in composite materials along with over a decade of hands on laboratory pultrusion and field experience has brought him to the forefront as a widely respected expert in the field. Borna has worked on different thermosetting resin as well as different thermoplastic resin and he was one of the first to pultrude a thermoplastic Rod. He joined CSA in 2015 and ACI and ASTM in 2018 and he brings over a decade of experience. He is also an active member in Canadian Standard Association.