



Bond Behavior between Glulam and GFRP's by Pullout Tests

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Topic: Connections
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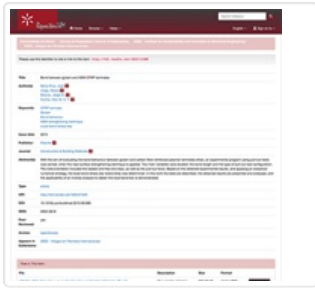
Summary:

To evaluate the bond behavior between glulam and GFRP rods, applied according to the nearsurface mounted strengthening technique, an experimental program composed of beam and direct pullout tests was carried. In this experimental program three main variables were analyzed: the GFRP type, the GFRP location into the groove, and the bond length. From the monitoring system it was registered the loaded and free end slips, and the pullout force. Based on these experimental results, and applying an analytical-numerical strategy, the local bond stress-slip relationship was calculated. In this work the tests are described, the obtained results are presented and discussed, and the applicability of the inverse analysis to obtain the local bond law is demonstrated.

Online Access: Free

Resource Link

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Bond Between Glulam and NSM CFRP Laminates

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Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Topic: Design and Systems

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Summary:

With the aim of evaluating the bond behaviour between glulam and carbon fibre reinforced polymer laminates strips, an experimental program using pull-out tests was carried, when the near-surface strengthening technique is applied. Two main variables were studied: the bond length and the type of pull-out test configuration. The instrumentation included the loaded and free-end slips, as well as the pullout force. Based on the obtained experimental results, and applying an analytical-numerical strategy, the local bond stress-slip relationship was determined. In this work the tests are described, the obtained results are presented and analysed, and the applicability of an inverse analysis to obtain the local bond law is demonstrated.

Online Access: Free

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