



## Evaluation of Grout-Filled Mechanical Splices for Precast Concrete Construction

### Description

#### Meta Fields

**Project Completion Year :** 2008

**Project Starting Year :** 2008

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**Primary Sponsor Contact Info :** Michigan Department of Transportation Construction and Technology Division P.O. Box 30049 Lansing, MI 48909 USA

**Budget :** 0.00

**Key Words :** Grout filled splices, mechanical splices, fatigue, slip testing, creep, NMB Splice Sleeve, Lenton Interlok

#### Abstract :

This report evaluates two proprietary grout-filled mechanical reinforcement splices, the Lenton Interlok and the NMB Splice Sleeve, for suitability in connecting precast concrete structural elements. The testing program included slip, fatigue, ultimate load, and creep. Both splices met the AASHTO LRFD provisions for slip and fatigue, demonstrating little displacement both before and after fatigue testing of 1,000,000 cycles with a stress range of 18 ksi. The ultimate loads of the two splices demonstrated that they are capable of exceeding 125 percent of the reinforcing bar's yield strength, and in most cases 150 percent of the reinforcing bar's yield strength. Subjected to sustained loading, neither of the splices showed susceptibility to significant creep displacements, though the limited data suggests epoxy coating may lower ultimate load capacity after sustained loading. Both products are recommended for use on department projects. Proposed revisions to the department's Qualified Products List and Qualification Procedure for Mechanical Reinforcement Splices are included.

**Subject :** Grouted Couplers Non-seismic

**Group :** Substructure

**Category :** Completed Projects