

Standard Guidelines for Product Review

REBAR SPLICE, MECHANICAL;

Section 00530.42

October 12, 2009

00530.42 – Rebar Splices, Mechanical

Process - Submit the following:

- [Preliminary Information for Product Evaluation Form](#).
- Independent Test Results showing compliance with Specs listed below.
- Spec Data Sheet.
- Samples of each size (both black steel and coated)
- Detailed installation instructions and a sample splice.
- List of Limitations and Precautions.

General – All mechanical splices used on ODOT projects must come from the Division’s Qualified Products List (QPL) (except for welded splices). Because of possible elongation, we do not allow splices that utilize a swaging process to be used on column bars for bridge raising applications.

Specifications: Mechanical splices for reinforcing bars are systems, which connect the bars without raising their temperature above 1300 °F.

- Provide mechanical splices which develop at least 135 percent of the specified minimum yield strength of the reinforcing bars in tension. Where bars of different sizes or strengths are connected, the governing strength shall be the strength of the smaller or weaker bar.
- The total slip of reinforcing bars within a mechanical butt splice sleeve shall not exceed 0.040 inches, measured between gauge points clear of the splice sleeve, when the reinforcing bars are loaded in tension to 67% of the specified minimum yield strength of the reinforcing bar. There are no maximum slip requirements for mechanical lap splices.

Process for QPL Qualification – As part of the QPL approval process the manufacturer must submit samples and independent testing showing conformance with our specifications for each size of rebar, with and without epoxy coating. These test reports and the other items listed above will be taken into consideration for inclusion on the QPL. The approval process is not quick, and should not be used for job specific approvals.

Process for Field Verification - After QPL approval, prior to installation on ODOT projects, the contractor is required to submit job-control samples to the Central Materials Testing Laboratory for testing. This is to ensure that the installer is qualified to construct the units. Passing tests allow the splices to be installed, on that specific project, by that installer. Failure of any one of those tests will prohibit that installer from installing the splices until further testing shows conformance with our specifications. Frequent failures of job-control tests from multiple installers can be reason for rejection from the QPL.

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During the Field Verification, each installer shall be qualified / monitored as follows:

1. Before starting work, provide three samples assembled by the installer, of each completed splice for each type, size, and lot to be used.
2. Submit one sample for every 100 splices thereafter, by type, size, and lot.

General – Epoxy coating or heat shrink tubing may be necessary, and if specified, should be done in such a manner so as to not damage the integrity of the splice.

Submittals for Transitions will only be allowed from manufacturers already on the QPL for regular splices. Samples for qualification are not required, but field verification samples will follow the normal splice sample requirements listed above. All other requirements apply.

You can review our specifications at: <http://www.oregon.gov/ODOT/HWY/SPECS/index.shtml>

Submit QPL samples, application, and documentation to:

Mike Dunning
New Products Coordinator - Oregon DOT
800 Airport Road SE
Salem OR 97301-4798
503-986-3059

<http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/QPL/QPIndex.shtml>