

System Qualification of Grouted Post-Tensioning Systems

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Current PTI Certification Committees

- CRT-10 (PCSC) – PC Strand Plants
- CRT-20 (UTPC) – Unbonded Tendon Plants
- CRT-30 (UFPC) – Unbonded Field Personal
- CRT-40 (BFPC) – Bonded Field Personal
- CRT-50 (SOGEC) – SOG Geotechnical Engrs
- CRT-60 (RRSFPC) – Repair Field Personal
- CRT-70 (GPTQC) – Grouted PT System Qual.

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PTI/ASBI M50.3-12

Guide Specification for Grouted Post-Tensioning



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American Segmental Bridge Institute **ASBI**

The purpose of this document is to establish a unified, nationally recognized specification for grouted post-tensioning.

Some stated Goals from M50.3

- Set minimum standards for all post-tensioning work.
- Provide minimum requirements for individual components of Post-Tensioning Systems.
- Identify testing requirements.
- Define choice of Tendon Protection Levels.

Criteria for Evaluation

- Objective and Consistent
- All Types of Systems
- Linked to Specification
- When is recertification required?
- What is tested (system, component, etc.)?
- What is the approval designation?
- System Approval vs. Supplier Approval

PT System Approval Matrix Presentation, May 2014, Gregory Hunsicker, Chair, PTI Grouted PT System Qualification Committee



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Objective and Consistent

- Easy for any reviewing and authorizing body to come up with consistent results, regardless of the location or system.
- How: Use “worksheets” with Yes/No or Pass/fail type criteria.
- Why: Ensures systems are meeting the specification, takes the subjective bias out of the equation. Allows for multiple labs to be available for this type of review.
- Matrix – Identifies specification requirements and references “Worksheets” for each section.

PT System Approval Matrix Presentation, May 2014, Gregory Hunsicker, Chair, PTI Grouted PT System Qualification Committee

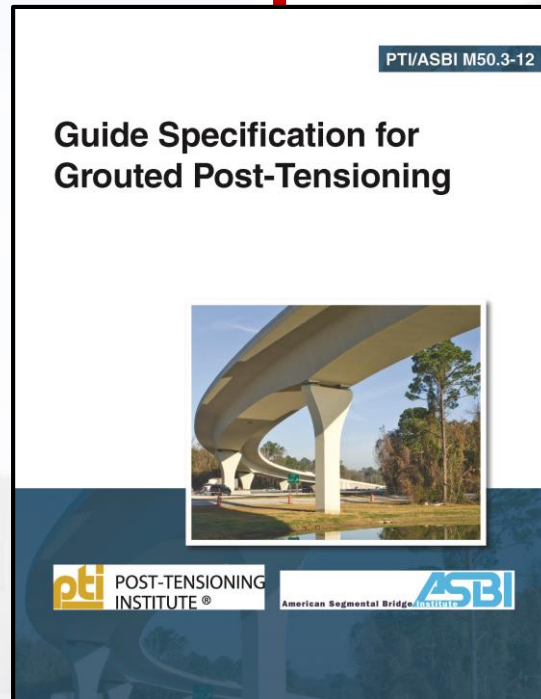


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All Types of Systems

- Matrix used for all types of tendons (Internal, External, Strand, Bar, Segmental).
- Matrix calls out testing required for different Tendon Protection Levels (PL).

Linked to Specification



- All items are from the PTI / ASBI M50.3 Specification.
- Section number will be called out in the matrix.

PT System Approval Matrix Presentation, May 2014, Gregory Hunsicker, Chair, PTI Grouted PT System Qualification Committee

When is Recertification Required?

- Three main causes for recertification:
 - Base Material Change
 - Base Material Supplier Change
 - Geometry Change
- Matrix identifies when/if each will apply.
- For example, if the same material is being supplied, but from a different source, some tests may be required, but not typically the entire system test. This is important to avoid unnecessary and redundant testing. The opposite is true as well.

What is tested?

- Components (individually test duct, anchors, grout caps, couplers, etc.).
- System (Perform tests on system by size).
- “Worksheet” for both component tests and systems tests.

Approval Designation

- Overall Summary approval to be by type, size, PL.
- Some components may pass and qualify for a higher PL even though system is a lower PL.

System Approval vs. Supplier Approval

- System approval establishes that system meets the specification.
- System approval is relatively easy to prove, monitor and maintain consistency.
- Need system approval before supplier approval.
- Supplier approval most likely a second step, if ultimately desired.

PT System Approval Matrix Presentation, May 2014, Gregory Hunsicker, Chair, PTI Grouted PT System Qualification Committee



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Thank you for your attention!

Questions?



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