

PTI tech notes highlight areas of concern

The Post-Tensioning Institute (PTI) has issued two Technical Notes that PCI members should be aware of concerning potential relaxation of bars that are similar to, but do not absolutely conform to, ASTM A722.

Both technical notes were issued in June 2024. Technical Note 23 specifically addresses “Non-ASTM A722 Alternative Post-Tensioned Bar Considerations,” whereas Technical Note 24 focuses on “ASTM A722-Like Alternative Post-Tensioned Bar Considerations.”

In conforming to ASTM A722, reinforcing bars must undergo a cold-stress and stress-relief process that produces a high-strength, low-relaxation bar. The primary concern described in both technical notes is the early and unquantified early relaxation of these nonconforming bars when subjected to pre-tensioning.

Technical Note 24 says, “ASTM A722-like material includes bars that meet the mechanical properties of ASTM A722 (that is, yield strength, tensile strength, and elongation) but are manufactured using other processes that do not include the cold-stress and stress-relief process.” Thus, the technical note continues, “These other processes may produce bars with higher relaxation values.”

Technical Note 23 discusses the use of bars that do not conform to ASTM A722. The intent of the technical note is to “point out some of the differences in these alternative steel materials when used in prestressing applications.” Modulus of elasticity, creep and relaxation, and corrosion protection are discussed. The main thrust of this technical note is on use for rock or soil anchors, but it is more broadly applicable to any post-tensioning application.

PCI members who may be using bars that do not conform to ASTM A722 in post-tensioning applications can review PTI Technical Notes 23 and 24 at <https://www.post-tensioning.org/faqtechnicalnotes> to ensure the properties of the bars meet the requirements of the application.

INDUSTRY CALENDAR

Event details are subject to change.

PTI Convention

Phoenix, Ariz.

May 4-7, 2025

2025 IEEE-IAS/PCA Cement Conference

Birmingham, Ala.

May 4-8, 2025

11th Conference on Analytical Models and New Concepts in Concrete and Masonry Structures

Łódź, Poland

May 12-14, 2025

AASHTO Spring Meeting

Hartford, Conn.

May 12-15, 2025

fib International Symposium on Conceptual Design of Concrete Structures

Rio de Janeiro, Brazil

May 14-16, 2025

fib Symposium 2025

Antibes, France

June 16-18, 2025

Seventh International Conference on Accelerated Pavement Testing

Hotel at Auburn University and Dixon Conference Center Auburn, Ala.

July 20-24, 2025

Concrete 2025

Adelaide, Australia

September 7-10, 2025

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