

Penetron Crystalline Technology Hits the Roads – All Around the World

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EAST SETAUKET, N.Y. ([PRWEB](#)) February 18, 2020 -- The completion in January 2020 of extensive road construction projects in Dagestan and Georgia – both in the North Caucasus region – implemented the Penetron System to enhance road durability in challenging climates. A global overview shows how road construction has evolved to implement [Penetron’s crystalline technology](#).

“Increasingly, innovative technologies are being used in road construction and repair to ensure the new and repaired roads are more durable and will need less maintenance later on,” says Igor Chernogolov, President of Penetron Russia. “Experienced road construction crews around the world now routinely apply Penetron crystalline technology to enhance the durability of bridges, highways and tunnels.”

The large-scale road construction projects recently completed in Dagestan, a Russian republic on the western Caspian Sea coast, and the country of Georgia underline the effectiveness of Penetron’s crystalline technology.

Getting Connected in Dagestan

The major highways in Dagestan connecting Makhachkala, the capital, with the country’s other major cities were repaired and updated with the addition of culverts, retaining walls and wider aprons. A reinforced concrete bridge over the Aktash River in Khasavyurt (in central Dagestan) was also renovated.

Georgia Highways Upgrade

Farther west, a number of construction projects in Georgia included: the E-60 European transit road, part of Europe’s second longest transit corridor (from Brest, France, to Erkeshtam, Kyrgyzstan); a four-lane highway (including 21 bridges and five tunnels) on the Upper Osiauri Valley in northeastern Georgia; the Samtredia – Grigoleti highway (with nine bridges and four transport junctions) in western Georgia; and the Kavkaz Highway (culverts and retaining walls) in northern Georgia.

The full range of Penetron crystalline waterproofing products were used in all of these projects. Concrete treated with [PENETRON ADMIX](#) and/or a topical application of [PENETRON](#) material reduces concrete permeability to block the penetration of water and road salts through the pores and microcracks typically found in concrete. This enhanced level of impermeability significantly extends the service life of the treated structure without any additional repairs.

Combining Effectiveness and Reliability

An overview of the most notable road construction projects from the past 24 months shows a wide range of challenges faced – and a single, comprehensive solution: the Penetron System.

- Interstate 22 Bridge Decks – The concrete surfaces of both bridges were severely damaged by water intrusion and freeze-thaw cycles; a full rehabilitation helped avoid the need for a costly bridge replacement.
- Sampierdarena Funicular Tunnel – Genoa’s (Italy) newest funicular is 136 m (450 feet) long with a 30 m (100 feet) vertical climb; the tunnel is now encased in a waterproof concrete shell, receiving the protection to ensure

a prolonged service life.

- Egnatia Highway Bridge, Greece – Built along an ancient Roman road and now part of the European E90 highway system, a key concrete bridge was repaired and waterproofed with the help of a Penetron crystalline treatment.
- Texas State Highway 130 – also known as the Pickle Parkway, runs along an 89-mile (143 km) corridor east and south of Austin. Portions of the highway were waterproofed to meet environmental guidelines.
- City Ring Road & Ashgabat-Turkmenbashi Highway, Turkmenistan – These two roads form a key traffic artery connecting the airport to the country’s major highways. The main intersection and an adjacent 3.2 km (2-mile) sound wall were upgraded and made durable with the Penetron System.
- Road Reconstruction, Kazakhstan – the country’s road upgrade program repaired over 1,000 km (>620-miles) of roads in a year. The national roads management agency, Kazavtozhol, applied Penetron crystalline technology – innovative concrete waterproofing materials.

“As numerous test results have shown, concrete treated with Penetron crystalline products last substantially longer than untreated concrete,” adds Igor Chernogolov. “The increasing number of road construction projects using the Penetron System is clear proof of its effectiveness and reliability.”

The Penetron Group is a leading manufacturer of specialty construction products for concrete waterproofing, concrete repairs and floor preparation systems. The Group operates through a global network, offering support to the design and construction community through its regional offices, representatives and distribution channels.

For more information on Penetron waterproofing solutions, please visit [penetron\(dot\)com](http://penetron(dot)com) or [Facebook\(dot\)com/ThePenetronGroup](https://www.facebook.com/ThePenetronGroup), email [CRDept\(at\)penetron\(dot\)com](mailto:CRDept(at)penetron(dot)com), or contact the Corporate Relations Department at 631-941-9700.



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