



Bridge Deck Waterproofing

Eliminator® Product in Action

Messovouni & Kristallopigi Bridges

Client: EGNATIA ODOS A.E.

Consultant Engineer: MICHANIKI S.A. & ATTI-KAT S.A.
JOINT VENTURE

Authorised Contractor: SAFE & DRIVE LTD



The tried and tested partnership of **Eliminator** and **Bond Coat SA1030** can claim yet another significant achievement - the successful waterproofing of two major bridges on Greece's newest highway.

The 680 km Egnatia Odos Highway has been designed to fulfil the country's desperate need for improved infrastructure and to considerably cut driving times. Linking Greece's western seaboard with Turkey and connecting the countries of the European Union with the Balkans and the East, the finished highway will also connect four of Greece's major ports and six of its airports and significantly enhance cross-border communication and form the backbone of the country's transport system.

Situated in the heart of the Pindos Mountains, an area known for its seismic activity, the Messovouni and Kristallopigi Bridges, form an integral part of this new highway. Messovouni Bridge is a post tensioned balanced cantilever structure, whilst Kristallopigi Bridge is a pre-stressed concrete structure.



90mm surfacing system. The Contractor subsequently selected Stirling Lloyds **Eliminator** high performance bridge deck waterproofing membrane and **Bond Coat SA1030** - a proprietary, hot melt, solvent-free adhesive based on a polymer modified bitumen that provides a strong bond between the **Eliminator** membrane and the subsequent surfacing. Not only does the **Eliminator/SA1030** combination have a proven, unparalleled track record of successful applications worldwide with thin surfacing, the benefits of the system have also been noted on previous projects in areas of high seismicity. e.g. the Al Zampa Bridge in California. These attributes made it highly appropriate for this project, where the bridges are located in a high seismic risk zone and subject to tectonic movements.



Application Advantages

The **Eliminator/SA1030** combination enabled the confident use of thin surfacing. Being based on methyl methacrylate (MMA) resins the system has a far greater tolerance to atmospheric moisture and temperature extremes than any other waterproofing system. These features enabled Applicators, Safe and Drive Ltd to continue to apply the system despite temperatures in the mountains ranging from over 30°C in the height of summer, to below -20°C in the winter, as well as ensuring the system will perform in the long term under these extremes.

Not only has the application of some 21,000m² of **Eliminator** and **SA1030** to the highway's two new superstructures provided Clients Egnatia Odos A.E. with superior waterproofing and long term effective protection, it has heralded a technological advancement in Greek bridge construction.

Reducing the Load

In order to reduce the dead load on both of the bridges, Athens based Consultant Engineers Denco, proposed a departure from Greek standard specifications, specifying a durable, spray applied waterproofing system, which would negate the need for any additional concrete protection and enable the use of a thin,

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