Polyester grids for the reinforcement of asphalt layers

# HaTelit® C 40/17

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## The Tunis-Carthage airport

Runway 01-19, the principal runway of the Tunis-Carthage airport had been constructed with a concrete slab pavement. As a result of the strong development of tourism in the area, the runway endures ever-increasing amounts of traffic.

Subsequent to the acknowledgement of its decrease in quality by the Tunisian Airports and ATC Authority (l'Office des Ports Aériens de Tunisie (OPAT)) in 1992, the latter has decided to effect repair works on the principal runway by installing a new asphalt overlay.

In the central zone of the runway over a width of 15 m, corresponding to the main area affected by landing impacts and aircraft traffic, dilapidation was highly significant. The Tunisian Airports and ATC Authority opted for the installation of a reinforcement grid in order to prevent reflective cracking in concrete joint zones and in surface areas showing cracks.

The **HaTelit® C 40/17** grid manufactured by HUESKER Synthetic which profits from extensive experience in this special domain, has been chosen to resolve the problem.

**HaTelit®** is a flexible reinforcement grid incorporating a nonwoven to ease installation. It consists of a high-quality polyester reinforcement grid and an ultra-lightweight nonwoven. Both the reinforcement grid and the nonwoven have a bitumen-based coating. The nonwoven merely serves to make installation straightforward and ensure a continuous bond between the layers.

This flexible system, which is stable up to a temperature of 190°C and showing good chemical resistance to solvents and de-icing agents, guarantees the reinforcement of the asphalt.

The asphalt reinforced by this grid can take and distribute stresses out a layer area and, therefore,

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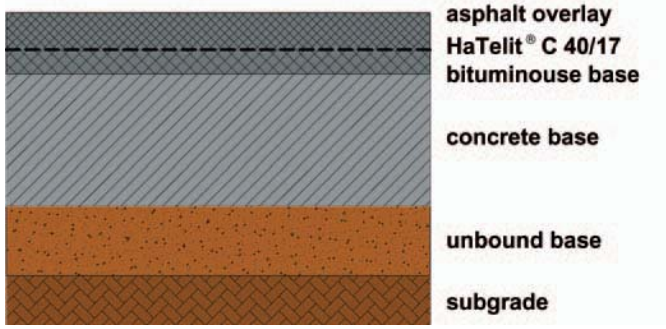
will significantly slow down reflective cracking.

In the case under consideration, repair works have been carried out by applying "grave-bitume" (a mixture of an aggregate with 3.5-5.5 per cent of hard bitumen) (60 mm) directly onto the concrete surface. On top a tack coat in the form of a bitumen emulsion (0.5 kg/m²), **HaTelit® C 40/17**, a „grave-bitume" layer of 70 mm and a finishing layer of 20 mm was installed.

The SOMATRA company has implemented these works in the winter/spring of the year 2000.

Until now (Status mid 2005) no cracks have reflected to the asphalt surface.

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| **Customer:** | International Airport of Tunis-Carthage |
| **Project management:** | Office des Ports Aériens de Tunisie (Tunisian Airports and ATC Authority) |
| **Enterprise:** | SOMATRA |

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