

PRAGUE AIRPORT RUNWAY, CZECH REPUBLIC

Advanced asphalt interlayer solution



Industry:	Transportation
Application:	Airports
Location:	Czech Republic
Product:	MIRAGRID® PGM-G

Overview

Prague Airport is the most important international airport in the Czech Republic and the biggest airport among the new EU member states. It has received the Eagle Award for 2011 awarded by the Association of IATA for being the best developing airport. This international “air-hub” handles about 11 to 12 million passengers annually. They can choose from about 50 regular airlines connecting Prague directly to about 130 destinations around the world. Five regular cargo carriers operate here, as well as dozens of other companies providing charter flights.

Challenge

Pavements in airports generally are subject to high stresses, but also to specifically high requirements concerning quality and safety. At Prague airport after many years of use, the existing old asphalt surface of the runway had reached the

end of its lifetime. Due to continuously increasing loading and more and more severe climatic conditions the asphalt of the runways had started to show cracks, natural bitumen aging (oxidation) had occurred. Prague airport, therefore had decided to launch a rehabilitation program with a reliable and technically sound method – the use of a composite asphalt interlayer **MIRAGRID PGM-G 100/100**.

Solution

MIRAGRID PGM-G 100/100 consists of a PP continuous filament non-woven which is combined with high tensile glass fiber yarns. When used as an asphalt interlayer system it may cause slightly higher investment cost, but provides a long lasting improved surface.

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CASE STUDY

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Quality and technical requirements were designed according to Czech standard ČSN 736121 describing construction and requirements of asphalt layers in roads and airports.

For the new surface of the runway asphalt concrete ACO 16 S PMB 45/80-60 was specified and installed in 2 layers with a thickness of 6 cm each (2.4 inches).

MIRAGRID PGM-G is a multifunctional product, successfully used since for many years in bituminous road surface rehabilitation. In accordance with EN 15381 it secures the three functions of:

- barrier (sealing),
- stress-relief, and
- reinforcement in one single product.

If installed under the new bituminous wearing course of runways, **MIRAGRID PGM-G** retards reflective cracking and efficiently increases the lifetime of the pavement. It provides a sustainable high-quality solution in airport engineering. The use of paving composites had been practiced in Prague Airport already in previous years.



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