

## **Airport paving worldwide**

Alessandro Bernacchia, Product Manager – Slipform Paving, Wirtgen

Tim Nash, Director - Concrete Products, Wirtgen

### **ABSTRACT**

Concrete paving in airports is a high stake game. All parts of the process from concrete, to logistics, to the machinery, to the paving team need to work in synch to create a high quality pavement that can withstand the increasing loads of airplanes of all sizes.

There are different design and construction methodologies often prescribed in the airport specifications - single or dual layer application, with or without fixed forms, automatic dowel (including sides) bar insertion or pre-placement of the reinforcement on baskets, etc.

By following the paving process, beginning with the concrete mixing and transportation, the placing and spreading of the material up to the consolidation, forming and finishing with the paver and the after-treatment, we will discuss the many factors that influence the paving results. During the presentation, we will explain these by using reference projects from around the world, with the focus on the following topics:

- Concrete mix and logistics influenced by the choice of single/dual layer application and the installation of the reinforcement. Logistics are one key point on a concrete paving jobsite, no matter if on airports or road construction. Stringline installations, fixed forms or preinstalled reinforcement/mesh cause additional obstacles on the jobsite, which in certain cases can be avoided or minimized.
- Benefits of dual layer paving, like easier use of two batch plants to increase productivity or cost reduction due to a potentially lower price mix design for the bottom layer. How does single or double layer paving influence the quality of the pavement? Dual layer pavements can also be constructed wet on wet with a single mix for both layers.
- Pros and cons of using fixed forms instead of freestanding slipforming - how to form sharp edges while controlling edge slumping.
- Benefit of electric versus hydraulic vibration, especially with low slump airport mixes, and how the vibration influences the workability of the concrete and the paving result.

WIRTGEN is looking back at several successful airport paving projects all over the world. Benefit from these experiences and find the best solution for your upcoming job together with us.