

Best practices in industrial floor construction in Romania

A new wood processing/pulping facility for Kronospan has recently installed Permaban's AlphaJoint product. Situated on a greenfield site approximately 10km north of Brasov, Romania, the building makes up a total floor area of approximately 40,000m² and is due to be completed in 2009. The internal floors are constructed from 250mm-deep steel-fibre-reinforced concrete with 70mm-deep saw-cuts on a 6m grid.

CEI report

Permaban has been commissioned to supply over 2000m of 225mm GD8 AlphaJoint with Alphafix to construct all the bays as well as to isolate roller shutter and personnel doors.

AlphaJoint is manufactured with two 10mm-wide cold-drawn, square-edged steel strips, providing greater impact resistance from wheeled traffic hitting the edge of the opened steel joint and thus reducing the potential for concrete breakdown. It employs

discontinuous plate dowels with purpose-moulded plastic sleeves to provide positive load transfer and two-way lateral movement.

On arrival on-site, Clive Jones, regional sales manager at Permaban, made his inspection and discussed with the flooring contractor the method of set-up for the formwork products necessary to ensure successful installation. In addition, Jones walked through the best practices necessary for all aspects of industrial floor construction.

"During inspection of the construction drawings, it was noticed that there were a number of internal manhole drain covers and pedestrian access doors that needed to be isolated. It was suggested by Permaban to construct a simple detail that would isolate the doors and manholes. A square frame was made from single AlphaJoints to isolate the manholes; single AlphaJoint and strip joint were used to isolate the pedestrian doors," explains Jones.

Installation training was conducted by Jones, where he demonstrated the joint features and Alphafix operation to eight members of staff from the flooring contractor. The first pour consisted of ten bays and then five lines of 8.5m-long joints were installed using a combination of Alphafix and the pinning method. There was also a requirement to manufacture a 3m x 6m bay within the tenth bay that will be used for a fire tank and control board.

Dry-shake was then applied using a Tremix-style barrow spreader over the majority of the slab and by hand around the perimeter. The slabs were panned using a twin-rotor power float and small edging Mosquito machine and power floated with a new twin-rotor power float.

"There is obviously a huge opportunity for Permaban to transfer best practices and knowledge in concrete floor construction in Romania," explains Jones. "We need to consider all aspects of the floor installation to ensure a quality floor can be installed. This includes the supply of tools required for the installation of our formwork to ensure that there is the capability to complete a quality floor installation."

Permaban is a founding member of the Construct-A-Slab alliance, where the mission is to promote best practices and methodology that is fundamental to the design and installation of high-tolerance quality industrial floors. The four members of the alliance include Permaban, FACE, Somero and Multiquip.

As a result of his time in Romania, Jones is investigating the possibility of the company offering a complete tool pack that customers may purchase when installing the AlphaJoint system. ■



Figure 1: Recently power-trowelled floor.



Figure 2: Completed floor slab.

(Photos: Permaban.)