



Project Profile

Aircraft Maintenance Hangar at Kuala Lumpur International Airport, Malaysia



In 2006, Sepang Aircraft Engineering Sdn Bhd (SAE) secured the contract to maintain Air Asia fleet of planes. SAE then awarded the contract to construct the hangar to Tegap Dinamik at the end of 2006. Tegap Dinamik was given only 10 months to handover the maintenance hangar to SAE.

With the limited time, Tegap Dinamik set off to re-design the hangar as the original design was above the budget given by the client. Scancem Materials was called in to redesign the hangar floor with steel fibre reinforced concrete floor to give better economy and crack control. For the steel structure, Tegap Dinamik roped in Zamil Steel to redesign with a more economical design.

The final slab thickness was 310mm as compared to the original thickness of 400mm based on the loading from Boeing 747-400 (being the largest plane in the Air Asia fleet of planes). With dosage of 20kg of Scanfibre CHO 80/60 NB high performance steel fibre with aspect ratio (L/D) of 80, the joints spacing was increased from 8m x 8m to 16m x 16m to reduce the number of joints.

Actual construction of the hangar steel structure started in July 2007 and the first casting for the slab took place on 17 August 2007. The whole floor was completed by 10 September 2007, less than one month after the first casting. The total floor area was 15,000m².

The steel fibre reinforced concrete (SFRC) slab was ideal for the contractor who was using the Somero 160 Laser Screeding machine to level the floor. The SFRC allows the Somero to move freely without obstruction from wire mesh or steel bars, thus speeding up work. Tegap Dinamik managed to successfully handover the hangar to SAE on the 1st October 2007, with actual construction time of only 7 months.



SCANCEM MATERIALS

Products For Engineered Concrete

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