

GIGANTIC AIRBUS 380 HANGAR PROTECTED BY CAFCO

In order to prepare in advance for the delivery of the massive new Airbus 380 aircraft, Malaysian Airlines is extending its maintenance facilities at Kuala Lumpur's Sepang International Airport by constructing an enormous new hangar, incorporating the world's longest column-free steel span of 230 metres.

The incredible size of the new aircraft has demanded a quite unique column-free design in order to accommodate the A-380's wing span during maintenance work. When fully in place the two colossal supporting steel towers (and 44 individual columns) will bear 5,700 tonnes of steel roofing made up of truss sections. These are to be fabricated on the ground before being lifted into position with giant hydraulic jacks, in one large section.



The roof trusses will not receive passive fire protection but the two giant steel towers (and 44 individual columns) are being given two hours fire protection through the application of SprayFilm WB3, an advanced water based intumescent coating manufactured by UK based **Cafco International**. In total, more than 4,000 square metres of steel are being protected.

The intumescent passive fire protection system consists of a two-pack Epoxy primer and Micaceous Iron Oxide Intermediate (MIO) coating for corrosion protection. This treatment is over-coated with SprayFilm WB3 to the required dry film thickness and then sealed with a two-pack Polyurethane coating to provide a long-life, maintenance free finish.

Sprayfilm WB3 has been used for a number of years on many major national and international projects. The thin film intumescent coating offers a fast 'through drying' solution and has proved to be a cost-effective alternative to solvent based equivalents. When subject to fire, a chemical reaction takes place causing the coating to expand and form an insulating layer, which prevents the temperature of the steel rising to a critical level.

Sprayfilm WB3 has been fully tested to BS476: Part 21 and ASTM E119 from Underwriters Laboratories (UL) and assessed in line with the Association for Specialist Fire Protection (ASFP) publication 'Fire protection for structural steel in buildings'. It also has Loss Prevention Certification Board (LPCB) Certification giving clients a quick, safe and easy-to-use treatment for providing between 30 and 120 minutes fire resistance on structural steel, including I-section beams, H-section columns and hollow sections. At ratings such as 120 minutes, the required final thickness of an intumescent coating increases, but Sprayfilm WB3 has the lowest thickness requirements of any water based intumescent coating and its high build capability reduces the number of coats required, thus facilitating lower labour costs.

The construction of the hangar at Kuala Lumpur is a joint venture between Zelan Construction, Marubeni and Tokyu. Installation of the SprayFilm WB3 is being carried out by Cafco's recognised applicator, Rushoe Enterprises. The site application work began in December 2006 and is expected to be complete by mid 2007.

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