

# MONOKOTE® and GRACE ICE & WATER SHIELD® protect Airport

Incheon International Airport utilizes MONOKOTE® and GRACE ICE & WATER SHIELD®.

Architect Terminal	Fentress Korean Architects Collaborative International
Architect Transportation Centre	Samoo Architects & Engineers
Architect KAL Cargo	ShinHan Architect
Centre/Hangars	
Fireproofing Applicators	WooSung KeonUp
Terminal	
Fireproofing Applicators KAL	JoongAng Co.
Cargo Centre/Hangars	
Roof Contractor Terminal	Han Jin Consortium (main) Han Maek Heavy Ind. Co., Ltd. (sub)
Roof Contractor Transportation Centre	Transportation Centre J/V (main) Han Maek Heavy Ind. Co., Ltd. (sub) Kyung Nam Aluminium Co., Ltd. (sub)
Control Tower Contractor	Kumho Construction Co.
Control Tower Concrete	SsangYong Cement Industrial Co., Ltd
Supplier	
High Bridge Contractor	Hanjin, Samsung, Dongah & Daeyang
High Bridge Concrete Supplier	SsangYong Cement Industrial Co., Ltd
GCP Solutions	MONOKOTE® fireproofing, GRACE ICE & WATERSHIELD® roofing underlayment



## Project Profile

### Supporting prestigious airport construction project

Located on Yeongjong island, about 50 km from Seoul, South Korea, the Incheon International Airport is 60 times the size of a football field and boasts the second tallest control tower in the world. Its two runways allow takeoff and approach over the sea, and the terminal facilities are designed to handle 27 million passengers annually.

GCP Applied Technologies is proud to have been associated with this prestigious, state-of-the-art airport construction project.

All GCP Applied Technologies materials were installed by experienced, trained applicators, and the architect and general contractor were delighted with the resulting quality and timeliness of completion.

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### Protecting against fire and water

Protecting such a structure from the transgressions of fire and water is an important issue. The choice of fireproofing and waterproofing materials used had to take into account not only product quality and performance, but also application efficiencies and quality control on site.

During airport construction of the control tower, which is one of the most prominent features of the project, the designers were challenged to achieve a very high quality finish to the concrete surface. The concrete supplier, SsangYong, tested a large number of admixtures from different companies to assess performance in meeting the plastic and hardened concrete requirements.

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### Proven in place fireproofing

SsangYong selected MONOKOTE® fireproofing and GRACE ICE & WATER SHIELD® roofing underlayment for many parts of the airport construction. MONOKOTE®'s proven in place performance has made it one of the most widely applied fireproofing materials in the world.

About 51,000 m<sup>2</sup> of MONOKOTE®MK®-6/HY® and MONOKOTE®Z-106 were used extensively in the main terminal building, the general hangars, and the Korean Air Cargo Centre. More than 130,000 m<sup>2</sup> of GRACE ICE & WATER SHIELD® roofing underlayment were used in the transportation center and the main terminal roofs.

As for the control tower, SsangYong chose concrete admixtures from GCP, which proved to deliver the best overall performance. These concrete solutions helped by providing slump retention and very good off form surface finish. There was no need for subsequent surface treatment. GRACE ICE & WATER SHIELD® underlayment provides the assurance of a tight seal around penetrations from the metal roof surface, which pass through the assembly to the structural elements below.

Throughout the airport construction project, GCP provided full support to the applicators, architect, and general contractor. Its technical team made frequent site visits to routinely check bond strength and applied thickness and to provide equipment maintenance.

As a result of its success on the Control Tower, GCP delivered similar solutions for the construction of the high bridge.

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