

Hanwha Newsletter

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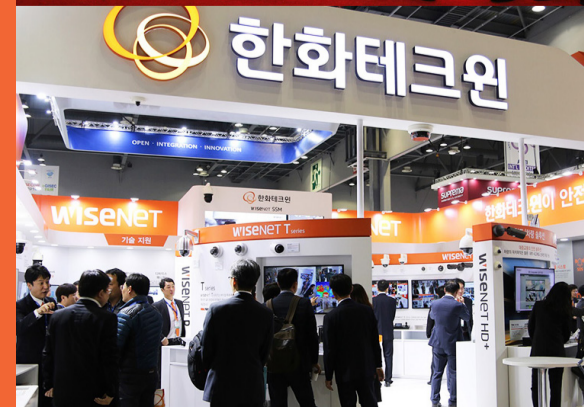
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Hanwha : ORANGE IS THE NEW GREEN

At Hanwha, we place trust and loyalty above all else. They are reflected in our core values and guide how we do business.

Our mission is to provide our customers with the highest possible value while building sustainable returns for our partners. Hanwha Orange represents our determination to succeed and to innovate in all that we do.

Paving the way to sustainability

At every stage of our managing our businesses, we strive to lessen the impact to the environment by leveraging low-carbon energy sources, reducing wastes and recycling. We're committed to running a reliable and eco-friendly business, achieving standards for others to follow.

Waste Management at Hanwha Chemical



(Source: Hanwha Chemical 2016 Sustainability Report)

Advancing sustainable growth around the globe

Hanwha's vigorous efforts to advance sustainable business is not bound by any borders. As the world's leading solar energy solution provider, Hanwha is on a mission to promote sustainable growth around the globe.

Hanwha Q CELLS, Maywood Solar Farm

In 2015, Hanwha won the Indiana Governor's Award for Environmental Excellence. It was in recognition for the company's contribution to transforming contaminated land into a solar power facility that can generate clean energy.



Hanwha Solar Forest Project

In 2016, Hanwha received an appreciation award for its continuous efforts to stop desertification in the Greater China Region. And to date, Hanwha has planted more than 490,000 trees across more than 1.16 million square meters all over the world.



Building a sustainable future for all

Hanwha pursues the energy for tomorrow, and focuses on developing products and services that enable a sustainable future at the core of its wide-spanning business interests.

Sustainable Business at Hanwha

Hanwha Chemical



\$3.37 Million
in eco-friendly R&D

Hanwha Group



\$1.4 billion
in green procurement

Key Milestones

1991



In 1991, Hanwha was the first company in Korea to implement eco-friendly policies in business management.

1999



In 1999, Hanwha took its first step towards reducing greenhouse gas emissions, by recycling industrial waste and installing water-saving facilities in its buildings, hotels, and resorts.

2010



In 2010, The Plaza in Seoul installed 15,000 LED lightbulbs, water saving facilities, and thermal insulation to save on energy consumption. Its external signage runs on clean energy generated from solar panels.

2013



Hanwha Chemical received Korea's first Carbon Trust Standard (CTS) for demonstrating outstanding climate change initiatives in August of 2013.

2015



By 2015, Hanwha reduced its energy consumption to 14,000 TOE. Since 1991, Hanwha reduced its greenhouse gas emissions by 40,000 tons, industrial waste by 12,000 tons, and water usage by 180,000 tons.

Hanwha has introduced green purchasing to procure efficient, recyclable office supplies. The cost of its green procurement reached USD 1.4 billion in 2015.

2017



Hanwha Q CELLS modules were tested against the criteria of the French Energy Regulation Commission (CRE) and received an official certification for low carbon footprint from Certisolis in 2017. ■

1995

In 1995, Hanwha Chemical became the first company in Korea to acquire an ISO 14001 Environmental Management System certification.



2000

In 2000, Hanwha established its official Environmental Safety and Health Policy. Since then, Hanwha has established its own eco-institute and has been an active advocate of sustainable business.



2011

In 2011, Hanwha joined the Carbon Disclosure Project (CDP) and became the first company in Korea to publicly disclose its carbon management information.



2014

In 2014, Hanwha won the Carbon Management Special Award Korea for its commitment to eco-friendly management at home and abroad.



2016

Hanwha Aerospace reduced over 1,317 tons CO2-eq through various eco-friendly manufacturing processes in 2016.



Hanwha Aerospace Takes Off To New Horizons

· Hanwha Aerospace to solely focus on aircraft engines by spinning off its security division from its prior entity, Hanwha Techwin



The grand opening ceremony of Hanwha Aerospace's new base of operation in Changwon

Hanwha Aerospace held a ceremony to commemorate the grand opening of its new base of operation in Changwon, South Korea on April 3. During the event, Hyun-woo Shin, Hanwha Aerospace's President and CEO, hailed the company's mission and welcomed workers with traditional Korean rice cakes.

"We will work hard to become the number one partner for the world's leading aircraft engine manufacturers," said President Shin to the attending dignitaries and staff. "It will take a lot of hard work, but I believe we can work together to make this happen."



Hanwha Aerospace changed its name from Hanwha Techwin on March 23 after its security division was spun off into an independent entity. As part of this change, Hanwha Aerospace moved its offices and facilities to Changwon City, 301 kilometers south of Seoul. The move was made to reinforce the company's exclusive focus on the aircraft engine business and to strengthen on-site management of the production line. The company will be listed on the Korea Exchange (KRX) as Hanwha Aerospace in mid-April of 2018.

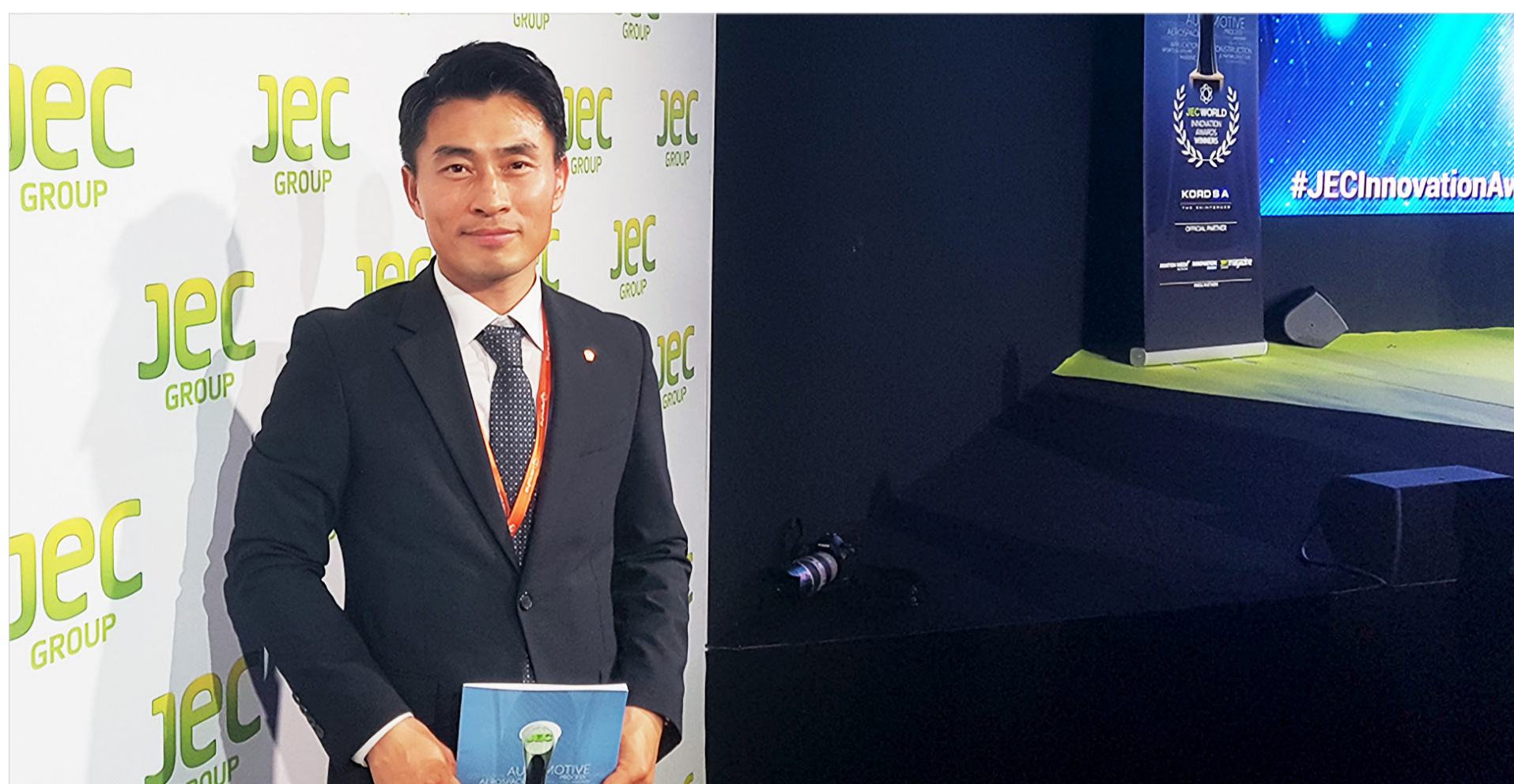
Hanwha Aerospace is South Korea's only gas turbine engine manufacturer and produces engines for airplanes and helicopters as well as individual engine parts and modules. The company's steadfast commitment to maintaining stringent standards has made it a trusted partner to major aerospace companies like General Electric and Rolls Royce. Hanwha Aerospace has also entered into a major Risk and Revenue Sharing Partnership (RSP) with Pratt & Whitney to co-build the next generation of advanced aircraft engines.

Since 1979, Hanwha Aerospace has assembled over 8,000 aircraft engines. The company is looking to grow its assembly and manufacturing capacity in the coming years and is currently building a 60,000m² manufacturing plant near Hanoi, Vietnam that will be operational by the second half of 2018.

"This is an exciting time for Hanwha Aerospace, and I am proud to be part of this new era for the company," said an employee who attended the opening ceremony. "I look forward to doing my part in helping the company grow and become the world's leading aircraft engine company." ■

Hanwha Advanced Materials: *Composite Materials for More than Just the Hypercar*

· The all new composite seat back is strong as steel but much lighter and simpler to assemble



Hanwha Advanced Materials Principal Research Engineer Kong Yong Sik delivered a keynote speech at JEC World 2018 in Paris

Hanwha Advanced Materials piqued the curiosity of visitors at JEC World 2018 in Paris, France with an intriguing new seat back for SUVs. Unlike the seat backs currently on the market, this seat back is made entirely out of composite materials. No steel was used to reinforce its structure.

"No one's ever thought of not using steel when making automotive seats," said Kong Yong Sik, the Principal Research Engineer responsible for the seat back's development. "Everyone's been preoccupied with trying to simply reduce the amount of steel they use."

Some visitors were skeptical that an all-composite seat back could perform as well as a steel-frame seat back. They were pleasantly surprised to see that it had passed even the most stringent safety tests with flying colors. They were even more surprised to learn that the prototype seat back is up to 30% lighter than the traditional steel seat back.

This revelation could be a revolution for the next generation of seat back designs. Automotive manufacturers are constantly on the lookout for new solutions that can shave off even a few ounces. Hanwha Advanced Materials just demonstrated that it is possible to reduce a significant amount of weight without sacrificing quality or safety. This will be of significant interest to car makers all over the world.

"Weight reduction is the one big unchangeable trend in the automotive industry," says Kong Yong Sik. "Regardless of gas, electric or hybrid vehicles, lightweight solutions mean less fuel consumptions overall."

Few manufacturers have considered using composites outside of high-performance vehicles. Hanwha Advanced Materials' prototype seat back proves that composite materials have wider applications that open up a brand new range of design possibilities for passenger cars.

Hanwha Advanced Materials, already the global leader in Lightweight Reinforced Thermoplastics and Glass-Mat Thermoplastics, hopes to begin full-scale production of its new composite seat back by 2019. The company estimates that it will be able to manufacture at least 600,000 units per year globally once production begins. Kong Yong Sik is keen to continue experimenting with the materials and even sees his seat back concept taking to the skies.

"People will always need to go places, even in the flying cars of the future," Kong says. "Weight reduction will go hand-in-hand with developments in mobility technology so we're going to keep working to find new applications for composite materials." ■

Explore This Month's News of Hanwha and Its Affiliates, Taking the Initiative in All Corners of the World



China

Hanwha Hotels & Resorts

Foodist Food Culture(Shanghai) Co., Ltd

Foodist Food Culture Conducts 2018 Management Briefing

On February 26, Foodist Food Culture's China subsidiary held a management briefing in Shanghai. Senior management from Korea took the effort to fly to China for this briefing, where the subsidiary's 2017 performance was reviewed and its new strategy for 2018 was laid out. Although the subsidiary did not perform as well as had been hoped in 2017, the Foodist's Chinese employees remain optimistic and even won a Hanwha Brand Award in 2017.

Going into 2018, the Foodist intends to improve its organizational culture, promote quality management, build smart kitchens, and strengthen customer service. Sales promotions, customer development, and improving competitiveness are also key to the Foodist's 2018 strategy.



Germany

Hanwha Q CELLS

Hanwha Q CELLS GmbH

DYNAMIC, ENERGETIC, EFFICIENT, POWERFUL, SUCCESSFUL

These five keywords perfectly characterize both our solar products and the football played by our international partner RB Leipzig. It is no coincidence that these five keywords lead you through our brand new partnership [video clip](#). In 1.14 minutes full of action, emotion and branding, we promote our partnership with the rising German football club.

In three versions of the clip, adapted to different market needs and branding strategies, the clip advertises our Hanwha Q CELLS and Q CELLS brands to viewers around the world. Next to the websites, YouTube channels and social media platforms of Hanwha Q CELLS and RB Leipzig, we will also show the partnership clip at trade fairs and events around the world.

The highlight of the clip comes at the end when Germany's national striker and big hope for the 2018 World Cup, Timo Werner, calls the viewer to action by exclaiming, "Make a switch to the sun - with Hanwha Q CELLS!"





Korea



Hanwha Total Petrochemical Is Honored for Its Contributions to the Korean Economy

Hanwha Total Petrochemical proudly accepted a High Tax Payer Award in the KRW 300 Billion and Over category during a ceremony at CoEx in Seoul, Korea on March 5. Since 2004, the High Tax Payer Awards have been handed out annually by the National Tax Service at the behest of the Korean President. These awards honor corporations that pay over 100 billion Korean Won in taxes in a single year. This is the second time Hanwha Total Petrochemical has received a High Tax Payer award, having previously been recognized by the Korean government in 2006.

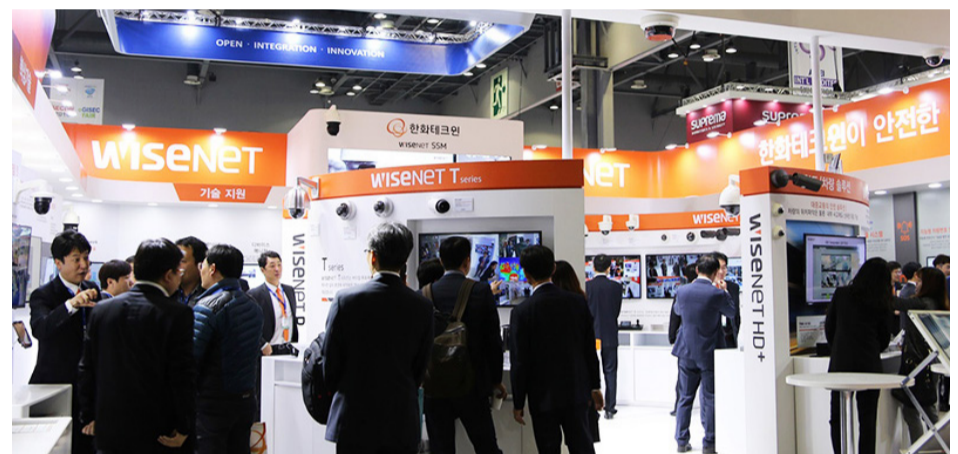


Hanwha Techwin Securities Shows Off Smart Security Solutions at SECON 2018

Hanwha Techwin Securities introduced a variety of security solutions at the International Security Exhibition and Conference (SECON), held at the Korean International Exhibition Center in Seoul from March 14 to 16.

Hanwha Techwin's booth at SECON, Asia's largest integrated security exhibition, comprised of three zones: Core Tech Zone, Product Zone, and Solution Zone. At each zone, visitors got the chance to experience Hanwha Techwin's security solutions first hand. Among the technologies on display were Wisenet HD+ cameras, extraLUX technology for ultra-low-light environments, and machine learning algorithms. Hanwha Techwin's Security Vulnerability Response Center's capabilities were also on display.

Solution Zone proved to be the most popular. It demonstrated Hanwha Techwin's optimized security solutions for industrial facilities, cities, apartments, and vehicles. Solutions included explosion-proof cameras designed for industrial facilities dealing with volatile materials, and IoT-enabled PTZ cameras which use image and facial recognition to track targets in busy city environments and automatically alert users if coverage is ever lost.



Hanwha Techwin's PTZ cameras can also be used as part of an apartment security system. Its image recognition technology can identify accidents and emergencies, and automatically alert first responders in addition to saving the images for visual evidence. The cameras can also be used for surveillance of vehicles parked in garages so that when there is tampering or damage, the recordings can serve to identify the cause.

"We are here to show off our capabilities as a leading security solutions provider," said a representative from Hanwha Techwin. "Our motto is 'Further Together', so naturally, we want to work closely with our customers and help them find solutions that will meet their needs."



Vietnam



Hanwha Life Insurance Vietnam Ltd.

Hanwha Life Insurance Vietnam Provides Healthcare Access to the Disadvantaged

On February 28, Hanwha Life Insurance's Vietnam subsidiary signed a cooperation agreement with the Sponsoring Association for Poor Patients to give away over 8,000 health insurance cards to disadvantaged people in Ho Chi Minh City. The company distributed more than 4,500 of these cards during the signing ceremony itself.

This is the fifth consecutive year that Hanwha Life Insurance Vietnam has donated health insurance cards to the disadvantaged in Vietnam. The company has taken a very active role in dealing with social issues in the nine years it has been operating in the country.



"As an insurance firm, we understand the importance of community healthcare, especially for disadvantaged people," said Back Jong Kook, CEO of Hanwha Life Insurance Vietnam. "We pledge to continue improving access to health care services and the quality of life in Vietnam."

To date, Hanwha Life Insurance Vietnam has spent more than VNĐ 9.4 billion (USD 413,000) to improve the lives of Vietnamese people in poverty. Between 2014 and 2017, Hanwha Life Insurance Vietnam has made many contributions to the people and the country of Vietnam. Aside from donating over 37,500 health insurance cards to the poor in 14 cities across a number of provinces, the company has donated significant amounts of money to fund the construction of preventative medical centers throughout Vietnam. Hanwha Life has also sponsored and paid for the construction of new homes for the poor. The company has even built schools as part of its mission to improve learning conditions in schools to foster the development of Vietnamese children.

Hanwha Life Insurance has a very strong presence in Vietnam, with 35,000 financial consultants servicing over 200,000 customers in more than 100 locations. In 2017, Hanwha Life Insurance Vietnam was named among the country's Top Ten Sustainable Businesses by the Vietnam Chamber of Commerce and Industry. This honor recognized the company's strong commitment and efforts to foster Vietnam's development through both business and community outreach. Hanwha Life Insurance Vietnam was also the proud winner of the 2015 Corporate Social Responsibility Award, jointly handed out by the Vietnamese and South Korean governments. ■