

Hanwha Newsletter

01 Hanwha's Spirit & Core Values

- Hanwha's Dedication
- Meet the Team: Hanwha Q CELLS Tino Wiczorek

02 Press Release

Hanwha Life Wins Best Insurance Capital Bond of 2018 at The Asset Triple A Regional Awards

03 Hanwha Worldwide News

Explore this month's news of Hanwha and its affiliates, taking the initiative in all corners of the world.



Hanwha's *Dedication*

Hanwha is a diverse group of individuals with many different background and specialties. But every member of Hanwha believes in our core values – **Challenge, Dedication, and Integrity**. These allow us to share in each other's strengths, come closer together, and focus on common goals. Here's how we do it.

Treasure the relationships with colleagues, the company, and customers and commit to achieving a greater goal

Hanwha's success and growth is the result of many people's dedication. The dedication of our predecessors is what led us through difficult times. Caring for co-workers enabled us to overcome difficulties. This power of dedication must continue. When we treat everyone with respect, growth and development will follow.

The heritage of dedication was what distinguished Hanwha from other companies in its history of development. Dedication starts from having respect for others and treasuring relationships, both in good times and bad times. It exists not only in personal relationships, but also at the team and company level. We must also be dedicated to our customers.



Dedicated to a Greater Cause

"We must contribute to the nation and society through business."

Chong-Hee Kim, our founder, believed that individuals must dedicate themselves to working in service of something greater than themselves.

As a business leader, he dedicated himself to growing and diversifying Hanwha Group and played a major role in Korea's reconstruction after decades of war and occupation.

Under his leadership, Hanwha brought new industries and much-needed economic stimulation to Korea, helping his country find its footing and grow into a leading member of the global community.

Today, Hanwha honors Chong-Hee Kim's memory by dedicating ourselves to giving back to communities throughout the world.



Hanwha Founder
Chong-Hee Kim

www.hanwha.com/en/hanwhafoundersmessage →

Hanwha's Spirit of **Dedication** in Action

Our strong belief in the importance of relationships is embedded in our DNA. Hanwha is fully dedicated to our partners, customers, and, also, to one another. From building solid relationships with leading aircraft engine manufacturing companies to combatting the impact of climate change, Hanwha is ready to give our all to contribute to a greater cause.



Hanwha Aerospace – A Trusted Partner

Hanwha Aerospace is investing in the future of aircraft engine technology by greatly expanding its R&D and manufacturing capabilities. This dedication has allowed us to build solid relationships based on trust with the world's leading aircraft engine companies.

www.hanwha.com/en/aerospace-dedication →



Hanwha Powers World Economic Forum

Through our global green initiatives, Hanwha is dedicated to helping the world reduce its reliance on fossil fuels and reduce carbon emissions through the adoption of solar energy.

Hanwha donated a photovoltaic modules with a capacity of 340 kW to the Davos Congress Centre to demonstrate the feasibility of solar power to the world leaders who attend the annual World Economic Forum in Davos, Switzerland.

www.hanwha.com/en/worldeconomicforum-dedication →

How to show **Dedication**

“We are dedicated to our company, customers, and one another to achieve a greater goal.”

Hanwha is dedicated to helping others, as evidenced by our CSR efforts in Vietnam and community outreach in China. All members of Hanwha around the world share the values that drive these efforts and seek to act based on the following principles.

Our action principles :

- Consider the needs and goals of others before yourself
- Always create value for customers and keep every promise you make
- Trust your colleagues’ abilities and collaborate to achieve your goals

See how your Hanwha colleagues represent the Hanwha spirit of dedication



Employees of Hanwha Life Vietnam Spreads Hope to the Underprivileged through Social Contribution

Hanwha Life Vietnam places great importance in community outreach. Through its CSR projects, the company has provided thousands of health insurance cards to the underprivileged, donated bicycles to schoolchildren, and even built hundreds of houses.

www.hanwha.com/en/hanwhalifevietnam-dedication



Hanwha Chemical (Ningbo) President Dong Seok Kim Recognized for Helping Ningbo Bloom

Hanwha Chemical was officially recognized by the municipal government of Ningbo, China, for its efforts in establishing a strong bond between the company and the city of Ningbo.

www.hanwha.com/en/hanwhachemicalningbo-dedication



At Hanwha, we are able to overcome even the greatest of difficulties thanks to the dedication of our members all over the world. We are dedicated to being the best we can be! ■

Meet the team

Hanwha Q CELLS' Tino Wieczorek

Tino Wieczorek is a Hanwha Q CELLS veteran. He first joined the company in Germany fresh out of college back in 2005. He played an important role in Hanwha Q CELLS' early days, helping scale up and automate the company's production lines. He also contributed to its global expansion, by setting up the company's Malaysian production plant.

Today, Tino, as a team leader of Maintenance and Equipment Engineering at Hanwha Q CELLS' primary manufacturing facility in Korea, he looks back fondly of his time with the company and the amazing journey he's been on.



The Malaysia plant was spinning up while we were finishing our final expansion project in Germany. Our focus in Malaysia was standardizing the tools. Every tool was only "semi-standardized" until we implemented our fully standardized material tracing system called the Manufacturing Execution System (MES). Since its introduction, the MES has set global standards with its 100% traceability of cells and modules and full automation capability.



Hanwha Q CELLS headquarter located in the Solar Valley in Thalheim, Germany

Q1. Please introduce yourself.

My name is Tino Wieczorek and I'm the team leader for Maintenance and Equipment Engineering at Hanwha Q CELLS. I've been working at Q CELLS for almost 15 years. I started my career with Q CELLS in 2005 as an engineer responsible for metrology tools, optics, and electrics.

Q2. How did you first join Hanwha Q CELLS?

To be honest, I wasn't planning on joining Hanwha Q CELLS. But it was an up-and-coming business, growing really fast, so I decided to apply because it seemed like the best choice. When I graduated from university, Hanwha Q CELLS was looking for new employees who knew how to handle optical, fully-automated measurement systems to reduce the amount of manual labor needed on the production line. This was exactly what I'd studied and why I'd become an engineer, so I signed up.

Q3. Is Korea the first time you've worked overseas?

I first became an expatriate in 2002 when I began working in Malaysia – Hanwha Q CELLS Malaysia – and stayed there for five years. Towards the end of that time, I was offered the opportunity to move to Korea. This was a great opportunity because Hanwha had just opened a brand-new factory in Jincheon, Korea and I'd already helped two factories get set up and become successful.

Q4. What did you do prior to moving to Korea?

In Germany, our goal was to scale up our manufacturing capacity. So, we had one expansion project after another – lines 1, 2, 3, 4, 5, 6 – in just two years, moving really fast. With each project, we were constantly improving the efficiency of our tools and the efficiency of our products.

Q5. What is this tracing system?

The advanced tracing system allows me, as an engineer and team leader, to monitor the performance of our tools so we can determine the lifespans of our parts, monitor defect rates, failure rates, and schedule maintenance and upgrades. This helps us all become better engineers at Q CELLS. This sets Q CELLS apart from the rest of the market since we're the only ones who use this sort of tracing technology, giving us a huge advantage.



Tino Wieczorek and his team member working at Jincheon plant

Q6. What are your responsibilities here in Korea?

I'm in charge of Cell MEE (Maintenance and Equipment Engineering), which is maintenance and equipment engineering. We play an important part in making sure Hanwha Q CELLS meets our global production KPIs.

The Cell MEE team is responsible for taking care of the tools used in the factory, improving those tools, and working to make sure we hit our ambitious manufacturing targets. When Hanwha Q CELLS wants to produce new technology, it's our job to develop the new tools that support the new technology.

Q7. What do you think makes Hanwha Q CELLS a strong player in the solar industry?

Our strengths are our advanced factory automation, our smart factories, and our R&D facilities in Korea and Germany that continuously develop new technologies.

Smart factories are basically manufacturing facilities that incorporate a lot of information technology. They leverage a large amount of accumulated data to help create new technology to enhance efficiency.

Our assets generate huge amounts of data every day and we use this data to build an efficient automation system. Here in our Korean factory, we used the information we gathered to create efficient factory lines that can match our competitors' productivity with less manpower.

Factory automation enables us to make our products with high efficiency and enhance our quality control and maintenance. In so doing, we produce high quality photovoltaic modules recognized all over the world.

Q8. What do you remember most about your time at Hanwha Q CELLS?

So, what I remember from my 14 years at Q CELLS, for sure, is my first day at work. In Germany we called it the "Q Day", and we were introduced to the Q CELLS culture. I became part of one family and it meant I could talk to the CEO the same way I talk to my colleagues. I continue to enjoy working in a very familial culture.

I also remember the ramp-up time at the Malaysia factory. "Ramp-up" refers to the period at the start of operations to when all the problems get fixed on the factory line. The ramp-up period in Malaysia was very short and as a result, it turned Hanwha Q CELLS into the largest photovoltaic manufacturer in the world.

And of course, I remember successfully expanding our first and second factories here in Korea.



Q9. As a Hanwha Q CELLS veteran, is there anything you'd like to say to newcomers to the company?

I believe in excellence. Meaning excellence in photovoltaic manufacturing.

Excellence is important, it's a part of our slogan, but it's not really a skill, it's more like a habit.

Remember that it's not just about you. Everything you do should be the best work possible, done as efficiently as possible. This gives everyone around you the best chance to achieve excellence as well. ■

Hanwha Life Wins Best Insurance Capital Bond of 2018 at The Asset Triple A Regional Awards

· Hanwha Life is recognized for its hybrid securities issuances – the largest by a Korean insurer and for having the lowest spread in Asia since 2008



Sang-wook Choi(center), IR head at Hanwha Life, proudly holds Hanwha Life's award for Best Insurance Capital Bond of 2018 at The Asset Triple A Regional Awards

Hanwha Life was recognized as one of Asia's best bond issuers at the annual Triple A Regional Awards by The Asset, a business news magazine. The company received the award for "Best insurance capital bond" of 2018 in recognition for a landmark billion-dollar bond issuance it made in April of 2018.

The offering was the largest issuance of hybrid securities ever made by a Korean insurer. It was also admired for only having a spread of 200 basis points, that according to The Asset, was "the lowest among all US dollar-denominated hybrids since the 2008 global financial crisis." Hanwha Life's achievement with the bond issuance was significant enough that they were recognized at the Asia-wide Triple A Regional Awards, a step up from the local Triple A Country Awards.

"The bond issuance was made at a challenging time amidst rising market rates and other issues," said a spokesperson for Hanwha Life. "However, demand far exceeded availability and most of the bonds were purchased by major global investors."

The Asset is a Hong Kong-based publication that offers independent insight into the Asian financial industry in both print and digital form. Since 2007, The Asset has annually handed out its Triple A Awards to recognize significant achievements in the Asian financial industry. ■

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Germany



Hanwha Q CELLS GmbH

Hanwha Q CELLS hits the road in Germany to promote Q.PARTNER program

Hanwha Q CELLS' EU marketing team recently embarked on a roadshow across the German cities of Muenster, Soltau, Thalheim, Pforzheim, and Ausburg, to promote Q.PARTNER program.

The marketing team's road trip was part of a recruiting push to expand Hanwha Q CELLS' roster of partner solar suppliers and installers as the company prepares for the wide release of the Q.HOME Cloud and Q.ENERGY smart energy solutions. During the trip, 175 Q.PARTNER members came out to get hands-on experience of those upcoming products as well as the Q.HOME+ energy storage solution.

Under the Q.PARTNER program, participating businesses receive training and marketing material on Hanwha Q CELLS' extensive portfolio of solar energy products so that they may promote the benefits of choosing Hanwha Q CELLS to



their own customers. There are currently more than 1000 Q.PARTNER members in the EU, with that number steadily rising.

On the back of this successful roadshow, the Hanwha Q CELLS EU marketing team plans on hitting other German cities throughout the first half of 2019.



Korea



Hanwha Total Petrochemical awards scholarships to local students from Seosan city

Hanwha Total Petrochemical held its annual Regional Talent Scholarship Ceremony for incoming university freshmen at its flagship Daesan production facility in Chungnam Province, Korea. 20 graduating high school seniors from the city of Seosan received USD 53 thousand in scholarships from Hanwha Total Petrochemical on the recommendation of their teachers.

Kwon Hyung-wook, CEO of Hanwha Total Petrochemical, was on hand to personally present the students with their scholarships. He also congratulated them for all their hard work and wished them well, adding that there were many exciting new opportunities awaiting them in the future.

Hanwha Total Petrochemical has been handing out scholarships every year since 2013. The program was established to encourage high school students in Seosan



to excel in their studies and be accepted into top universities, so they can go on to represent their hometown through their academic achievements.



United States of America



Hanwha Techwin's pioneering camera wins gold at ASTORS Homeland Security Awards

Hanwha Techwin's Wisenet PNM-9000VQ multi-sensor camera recently won the gold award for "Best IP Video Surveillance Solution" at the ASTORS Homeland Security Awards for its unique four-lensed design that allows the camera to continuously monitor in all directions with zero blind spots.

The ASTORS Awards is a prestigious industry award handed out annually by American Security Today, a digital publication that presents its audience with the latest news about security products and technologies.

The PNM-9000VQ is a pioneering omni-directional camera design that received wide acclaim and attention when it was first released. Through a single installation, the camera offers four simultaneous security feeds, providing customers with a flexible and customizable surveillance solution that is ideal for monitoring large and busy spaces such as airports and shopping centers. Customers can choose between 2MP and 5MP sensor modules that are easily exchangeable and can also choose to mix and match from a variety of lens options to best meet their needs.



"It is truly an honor to receive such a highly sought-after award," said a Hanwha Techwin spokesperson. "American Security Today recognizes the world's leading security solutions through a comprehensive assessment of technical innovation, interoperability, and overall impact on the global security industry."

