

## Press Release

### Linde LienHwa invests in local production of electronic materials at two Taiwan facilities

- *C<sub>4</sub>F<sub>8</sub> (octafluorobutane) purification and filling facility in Taichung*
- *HCDS (hexachlorodisilane) transfill facility in Guanyin*

**Taipei, Taiwan and Shanghai, China, 11 September 2017** – Linde LienHwa, a member of The Linde Group and a leading supplier of gases and chemicals to the electronics industry, continues to invest in local production of electronic special gases (ESGs). This enhances its portfolio to meet the growing demand of Taiwanese and regional customers in the semiconductor and display industries. LLH is leveraging access to global expertise to build first-in-kind capabilities in Taiwan to innovate locally for customers.

#### **C<sub>4</sub>F<sub>8</sub> purification at Taichung Harbor**

Linde LienHwa's capability for purification and filling of C<sub>4</sub>F<sub>8</sub> in Taichung Harbor is outstanding in Taiwan. With over 100 tons per year of capacity, Linde LienHwa is positioned to meet demand in Taiwan as well as serve customers throughout Asia. An etching gas, C<sub>4</sub>F<sub>8</sub> enables semiconductor manufacturers to cut chip patterns at leading-edge dimensions and also create the conduits through which several chips can be electrically connected. In addition, C<sub>4</sub>F<sub>8</sub> is used to clean production chambers in predominantly older-sized semiconductor tools.

#### **HCDS at Guanyin**

Another step forward in Taiwan is LindeLienHwa's transfilling facility for HCDS in Guanyin, a district of Taoyuan City. The transfill process involves repackaging material into specialized stainless steel vessels while improving the purity and validating the quality. This Linde LienHwa investment is sized to serve both Taiwan and customers throughout Asia. HCDS is used for depositing silicon compounds at very low process temperatures, which is important for making nanoscale electrical insulators in memory and logic

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processor chips.

### **Local partner. Global expertise.**

“By investing in material processing in Taiwan, we are significantly reducing the supply chain risk and increasing material availability for our customers,” notes Alex Tong, President of Linde LienHwa. “These new facilities represent the latest phases in our commitment to expand ESG production in both Taiwan and China.”

Linde LienHwa maintains one of the largest Taiwan-wide networks of on-site gas production, electronic bulk gases, ESGs, ultra-pure wet chemicals, chemical production and stocking facilities. Linde LienHwa offers an impressive range of electronics materials that is among the best in the industry. Its products enable cutting-edge manufacturing in the semiconductor, solar, display and solid state lighting/LED industries.

“Our investments in Taiwan support our global strategy of supplying products and capabilities where they add value for our customers,” states Andreas Weisheit, Head of Linde Electronics. “In addition, we continue to invest throughout the Asia Pacific region, with new capacity and sources in China and South Korea. It’s our diversity of sources that distinguishes Linde as a leading provider to the electronics industry.”

Linde Electronics, its global partner, is the electronics materials and service business of The Linde Group, an industry leader in the industrial gas sector. Linde Gas operates in more than 100 countries, with world-class R&D centers, including its newest electronics R&D center in Taichung Harbor. Linde Engineering designs and builds gas generators that excel in purity, efficiency and up-time.

### **SEMICON Taiwan**

Linde LienHwa will be exhibiting at the SEMICON Taiwan tradeshow in Taipei September 13-15. Its focus

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will be on the quality, expertise, service and technical strengths that Linde LienHwa and its global partner Linde Electronics bring to the semiconductor industry through such offerings as electronic specialty gases, bulk electronic gases and on-site solutions like SPECTRA® nitrogen plants.

Candice Fan, Global Strategic Supply Manager for Linde Electronics, will be speaking at the co-sponsored Semiconductor Materials Forum on September 13 to be held in the Grande Luxe Banquet Splendor Ballroom. Her talk entitled “The New Si-Ik Road: Challenges and Opportunities in China for Electronic Material Suppliers” given at 15:00 will explain the new dynamics in the supply of electronics materials on both sides of the Taiwan Strait.

SEMICON Taiwan is the annual tradeshow for the semiconductor manufacturing industry in Taiwan. All visitors are welcome to visit Linde LienHwa in the Nangang Exhibition Center on 4F in booth number 242. For further inquiries, please contact Sheena Liu at [sheena.liu@linde-lienhwa.com.tw](mailto:sheena.liu@linde-lienhwa.com.tw).

### **About Linde LienHwa**

Linde LienHwa is an established joint venture of LienHwa Industrial Corp and The Linde Group, and is among the largest industrial gas manufacturers in Taiwan. Through close partnership with the worldwide-based Linde Group, Linde LienHwa has the capability to provide various high quality gas and gas-application technologies. Furthermore, in order to keep up with rapid growth, Linde LienHwa has invested tremendously in high-efficiency gas production equipment.

### **About Linde Electronics**

Linde Electronics is the global electronics business of The Linde Group and an industry leader in gases for the electronics market—semiconductor, solar, display and LED. Linde Electronics helps electronics companies achieve their goals through a strong focus on quality and environmental leadership, its expertise, commitment to the industry through ongoing investments in processes, engineering, and on-site and localized solutions, a broad portfolio that includes environmentally sustainable and highly specialized and rigorously measured electronic

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specialty gases (ESGs), bulk/pipeline gases, equipment, and services, and through working closely with customers to better meet their evolving needs.

For more information, visit [www.linde.com/electronics](http://www.linde.com/electronics) or contact [electronicsinfo@linde.com](mailto:electronicsinfo@linde.com).

### About The Linde Group

In the 2016 financial year, The Linde Group generated revenue of EUR 16.948 bn, making it one of the leading gases and engineering companies in the world, with approximately 60,000 employees working in more than 100 countries worldwide. The strategy of The Linde Group is geared towards long-term profitable growth and focuses on the expansion of its international business, with forward-looking products and services. Linde acts responsibly towards its shareholders, business partners, employees, society and the environment in every one of its business areas, regions and locations across the globe. The company is committed to technologies and products that unite the goals of customer value and sustainable development.

For more information, see The Linde Group online at [www.linde.com](http://www.linde.com)