

With sights on regional semiconductor development creating resilient supply chains, Entegris stays close to TSMC, taking hold of advanced process demands

What new opportunity does this leading global supplier of semiconductor materials see, prompting it to increase its investments in Taiwan and build its most advanced manufacturing facility under the backdrop of geopolitics?

Reported/Lín Hóng Dá

Leading global semiconductor materials manufacturing corporation, Entegris' President and CEO Bertrand Loy flew to Taiwan on May 9th to announce the opening of Entegris' new Kaohsiung facility. "At the Southern Taiwan's Kaohsiung Science Park through our most advanced manufacturing facility, we shall support the development of advanced processes and Taiwan's semiconductor industry," Loy said.

During the press conference, Loy spoke about his strong commitment to the Taiwan market.

Wealth Magazine Reporter asked: What would be the annual estimated revenue of the new Kaohsiung facility? Loy answered without hesitation: USD\$ 500 million. While looking at Entegris Taiwan General Manager Alvin Hsieh. Obviously, it was an ambitious goal.

The president forecasted revenue of USD\$ 500 million annually

Bertrand Loy is a prominent figure in the world of semiconductors. After assuming the role of Entegris' CEO in 2012, the company's revenue grew 3.7 times from USD 690 million in 2013 to USD 3.28 billion in 2022. Loy served as the Chairman of the Semiconductor Equipment and Materials International (SEMI) since 2013, and is well-acquainted with industry peers such as ASE Holdings COO Tien Wu and GlobalWafers Co. Ltd Chairperson & CEO Doris Hsu.

An industry insider pointed out that, relatively speaking, Loy said, Taiwan lacks technology in regards to polishing, and that is where Entegris excels. Loy comments that apart from being able to produce various specialty chemicals, Entegris also

possesses advanced polishing and filtration technology. Polishing can result in scratching from large particles in the slurry and it can leave behind residual slurry components. Entegris' filtration solutions address these large particles in the slurry and its post-CMP cleans address the residuals the slurry leaves behind. Entegris is one of the few corporations globally that provides custom designed solutions for these two demands.

He adds, Entegris has developed micro-contamination and advanced material delivery systems, where Entegris' filters are used in critical stages of advanced processes, "We are able to achieve atomic-grade control over these materials." Over the recent years, TSMC's requirements regarding material purity have surpassed parts per trillions, reaching even

zero impurity. The equipment cost for testing these materials alone easily surpasses millions of dollars.

These are definitely significant opportunities for Entegris. Loy further comments that Entegris will be producing liquid filters, high purity chemical drums and advanced deposition materials in the new Kaohsiung facility. In response to a reporter's question: **Is the current investment in Taiwan for the opportunities presented by TSMC's 2 nanometer site?** Loy comments that the new facility is able to produce demands required by advanced processes of 5 nanometers and below, which will of course also achieve the requirements of the 2 nanometer. He further adds that the semiconductor industry is moving towards regionalization. It is worth noting that Entegris has been conducting a back and



Entegris President and CEO Bertrand Loy announces the opening of its latest manufacturing facility in Kaohsiung

forth lawsuit with Gudeng Precision over that past 10 years, competing for the leadership in wafer carrier patents. When asked “**Will Entegris give up the wafer carrier business?**” Loy said “Wafer carriers are a very, very important product for us.” Further adding that Entegris will be increasing the production capacity of wafer carriers in Malaysia. **While TSMC and other companies are continuing their expansions to the USA, Japan and even Germany, how will Entegris react?** Loy said that every important

product of Entegris has at least two or more production facilities, for example, Entegris also has a large facility in Japan that produces polishing slurries.

Following the big players expanding globally

Looking at Entegris’ sites around the world, it covers all main semiconductor manufacturing hubs, from France, Germany, Israel, Singapore, Korea and China; In USA alone, Entegris has 5 operation facilities, creating a

Profile

Entegris

Since: 1966

President & CEO: Bertrand Loy

Headquarter Location: State of Massachusetts, USA

Employee count 9,000 employees

Revenue in 2022: USD 3.282 billion

2022 Net Income: USD 208 million

resilient supply chain. It is obvious that Entegris has already foreseen the future regionalization of semiconductor manufacturing.

Currently, it is the market low of the semiconductor industry with TSMC and Samsung and other majors players facing a recession. **How does**

Entegris envision and evaluate the risk of the future semiconductor market? Loy explained: “I do not have a crystal ball that can foretell the future; However, every time there are heavy headwinds or recessions, the rebound will be as strong or stronger as the downturn experienced.” 