

Press Release

Breakthrough collaboration between Aluminium of Greece and General Electric (GE) to optimize productivity and reduce energy costs

- Aluminium of Greece (AoG) in cooperation with GE, installs the world's first Digital Smelter, an innovative digital solution in the electrolysis process, based on Predix OS *
- The Digital Smelter will be developed by GE's teams in the US and the UAE, constituting an example of international cooperation for the world's first of its kind project
- This digital solution will optimize the electrolysis process of Aluminium of Greece (AoG) by reducing energy consumption, reducing the amount of aluminum fluoride used in the aluminum and allowing provision on pot leakages
- By applying GE's digital solutions for aluminum electrolysis, AoG paves the way to increase productivity and reduce energy consumption of this crucial aluminum sector in Europe

Dubai, UAE; February 14, 2017: GE (NYSE: GE) and Aluminium of Greece (AOG), a Mytilineos Group subsidiary, today signed a 10-year agreement in Dubai, the United Arab Emirates, to implement global first-of-their-kind digital smelter solutions for AOG to enhance its aluminium smelting process and contribute to increased operational efficiency and productivity.

The digital solutions are a significant step in charting the next generation of smelting operations globally. The agreement was signed by Dimitris Stefanidis, CEO of Aluminium of Greece and Joseph Anis, President & CEO of GE's Power Services business in the Middle East and Africa, in the presence of senior officials of both companies in Dubai.

"As the largest vertically integrated bauxite, alumina and aluminium production and trading unit in the European Union, we are constantly looking at innovative technologies to enhance our performance standards. The application of digital industrial solutions is a remarkable opportunity to achieve process optimization across our operations and to push productivity levels," said Dimitris Stefanidis. "With GE's digital smelter solutions, we are setting a global first for the aluminium industry that will contribute to our operational efficiency and set new benchmarks in the sector."

Underlining GE's strong global collaboration, digital strength and industrial know-how, the digital solutions for smelting operations are being created by a team of engineers and developers based in San Ramon, USA; GE Power's Digital Smelter Center of Excellence (COE) in Dubai, UAE; and GE's Global Research Center in Bangalore, India. The project will be executed by the team based at the COE in Dubai, while the facility that the solutions will be implemented at is located in Agios Nikolaos, Viotia, Greece.



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“GE has been at the forefront of digitizing the future of industry globally and in the region, providing digital industrial solutions for power generation and the LNG industry, among others” said Joseph Anis. “By bringing together the strengths of our multi-locational teams and GE Power’s Digital Smelter Center of Excellence in Dubai, we will collaborate with AOG to create a new chapter in the history of smelting operations as well.”

GE has been a stable partner of Mytilineos Group for more than two decades, through its cooperation with METKA in EPC projects and subsequently with AoG having supplied it with advanced technologies and signing multi-year agreements to cover the maintenance of gas turbines and associated generators.

The digital solutions will operate in the cloud, powered by [Predix*](#), GE’s operating system for the Industrial Internet. Virtual sensors will facilitate the ongoing evaluation of parameters such as temperature and chemistry that are not ordinarily monitored continuously. This, in turn, will help to anticipate the health and condition of the pot, providing timely monitoring reports on the operations of the plant.

“We will be able to recreate an actual smelter using artificial intelligence and physics-based models,” stated Bhanu Shekhar, Chief Digital Officer for GE Power in the Middle East and Africa. “This is a living digital model that will continuously generate smelter data, and will be a game changer in helping to address the challenges of power usage and the consumption of raw materials in the smelting industry.”

“The application of the digital smelter solutions will contribute to the operational efficiency improvement of the Aluminium of Greece, by lowering raw materials’ consumption, decreasing energy consumption, and reducing pot leakages,” concluded Dimitris Stefanidis.

GE’s digital solutions for aluminium smelting can help unlock a new era of productivity for this critical industry in Europe, the Gulf Cooperation Council (GCC) and beyond. A one percent increase in efficiency of aluminium smelter operations can contribute to an annual global savings of US\$970 million across the total cost of production, US\$936 million in output increase, and US\$464 million in operations and maintenance costs. In the GCC region alone, the same one percent increase translates into US\$28 million in savings on operations and maintenance. Today, the region’s aluminium smelting industry accounts for up to ten percent of the world’s total production, and GE has a strong history of leadership in the sector to enhance competitiveness, efficiency and sustainability for customers.

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About Mytilineos Group:

Mytilineos Group is a leading Greek industry active in Metallurgy & Mines, Energy and EPC Projects. Established in Greece in 1990, the Group’s holding company, MYTILINEOS HOLDINGS S.A., is listed on the Athens Exchange, has a consolidated turnover in excess of €1.3 billion and employs directly or indirectly more than 2,700 people in Greece and abroad. www.mytilineos.gr

About GE:



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GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry. www.ge.com



About GE Power:

GE Power is a world leader in power generation with deep domain expertise to help customers deliver electricity from a wide spectrum of fuel sources. We are transforming the electricity industry with the digital power plant, the world's largest and most efficient gas turbine, full balance of plant, upgrade and service solutions as well as our data-leveraging software. Our innovative technologies and digital offerings help make power more affordable, reliable, accessible and sustainable. www.gepower.com. Follow us on Twitter [@GE Power](https://twitter.com/GE_Power).

*Predix is a trademark of General Electric Company.

For more information, please contact:

Caroline Wehbeh
External Communications Director
GE Middle East, North Africa & Turkey
+971 4 4296318
caroline.wehbeh@ge.com

Elisa Gerouki
Senior Communications Officer
Mytilineos Group
+30 2106877489
elisa.gerouki@mytilineos.gr