

Press release

Constellium and PyroGenesis partner to advance plasma burner technology in aluminium melting process

Paris, April 10, 2024 – Constellium SE (NYSE: CSTM) announced today the signing of a partnership agreement with PyroGenesis Canada Inc. to test the use of plasma torch technology to support Constellium’s decarbonization roadmap. After successful first laboratory trials, Constellium and PyroGenesis have now entered an agreement to test this technology at industrial scale with the implementation of a demonstrator plasma-heated furnace system in one of Constellium’s casthouses.

A plasma torch operates by generating an electric arc that ionizes gas, creating a superheated plasma. This plasma, with temperatures surpassing traditional methods, offers a faster, more efficient, and environmentally friendly alternative to traditional burners. PyroGenesis is a leader in the development of advanced plasma technologies.

“As part of our decarbonization roadmap, Constellium has been evaluating various solutions to support the decarbonization efforts within our aluminium casthouses. The plasma torch technology has the potential to reduce our direct emissions by a factor of three compared to the current benchmark,” said Ludovic Piquier, Senior VP, Manufacturing Excellence and Chief Technical Officer of Constellium. “Our recent laboratory trials with PyroGenesis, soon to be validated at scale, have yielded promising outcomes. This could be a major step forward in our commitment to reduce our carbon footprint.”

“PyroGenesis was proud to host and work with the scientific team from Constellium during this important test campaign. The results from this campaign have led to today’s agreement to move forward with a planned scale-up to a full-size furnace at one of Constellium’s casthouses,” said P. Peter Pascali, CEO of PyroGenesis. “PyroGenesis is quickly becoming the go-to plasma solution company for key players in heavy industry as they seek solutions to meet their global decarbonization strategies. Constellium is one of the best examples of a global industry leader who is evaluating PyroGenesis’ electric plasma torches as a fuel-switching possibility.”

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▲ About Constellium

Constellium (NYSE: CSTM) is a global sector leader that develops innovative, value-added aluminium products for a broad scope of markets and applications, including aerospace, automotive and packaging. Constellium generated €7.2 billion of revenue in 2023.