Press release – Monza, November 25th, 2025

Toyota decarbonizes its industrial processes thanks to Fives' hydrogen technology

Fives, a global leader in industrial engineering, is supporting Toyota in its energy transition. Toyota Motor Europe is involved in a European-funded project titled HYINHEAT which focuses on decarbonising industry using hydrogen (H2) technologies. The car manufacturer has chosen Fives' hydrogen burner technology to equip a heat treatment furnace its site in Poland. It is the first time in its global network that Toyota is using hydrogen for this particular application.

Fives' hydrogen technology tested and validated by Toyota

Toyota had two major challenges: reducing its carbon footprint and maintaining the quality of the produced parts.
To address these, Fives offered its cutting-edge technology: a dual fuel burner (natural gas and hydrogen).

Rigorously tested at the Fives European Combustion Centre — one of the largest R&D centers in Europe dedicated to industrial combustion — **Fives' solution demonstrated its reliability regarding the combustion of hydrogen, which emits no CO_2. Thus, meeting the environmental objective**.

The beginning of a great collaboration

A first burner was installed at Toyota Motor Manufacturing Poland in August. There, **Fives' cutting-edge technology was tested to assess the quality of Toyota's production** while using full hydrogen combustion. **The results were conclusive, marking this the first step of a lasting collaboration between Fives and Toyota to decarbonize automotive industrial processes**.

"This successful supply of hydrogen burners illustrates Fives' ability to offer concrete, tailored and efficient solutions to support our customers in their decarbonization. We are proud of this fruitful collaboration with Toyota and are ready for future projects." **Francesco Giudici, CEO of Fives ITAS.**

"*Our manufacturing strategy follows a Multi-Pathway (MPW) approach to meet the diverse needs of our clients. We are applying the same philosophy to the decarbonisation of our factories. By testing burners capable of using sustainable gases —including hydrogen (H_2), natural gas (NG), and biogas—we are making significant progress towards achieving carbon-zero emissions.*" **Krzysztof Zieliński, Head of PE Innovation at Toyota Motor Europe.**

Technical features:

- 175 kW dual fuel conical burner with refractory
- Designed for hydrogen (H_2) and natural gas (NG) combustion
- 2 valve trains equipped with dedicated premium instrumentation
- 1 main control panel with PLC and HMI to:
  - operate the burner
  - select the percentage of NG/H_2 (from 100% NG to 100% H_2)
  - modulate the combustion air fan in real time according to the blend

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- Can replace a conventional NG burner with similar capacity originally supplied with the furnace

©Fives: Fives' hydrogen/natural gas burner tested and validated by Toyota

Fives, your partner for a more efficient and virtuous industry
From the first railway lines to the Eiffel Tower lifts and factory 4.0, for over 200 years Fives has been designing the disruptive solutions and technologies that make up industry. As a pioneer of decarbonization and digitalization, Fives is always one innovation ahead thanks to its ability to anticipate customer needs. By responding to the specificities of each market locally, Fives combines economic and environmental performance in 25 countries thanks to its 9,200 employees.

The Energy | Combustion Business Unit of Fives, under the renowned names ITAS®, North American® and Pillard®, designs, supplies and manufactures customized burners, combustion systems, and controls for furnaces, flares, and boilers. Fives' offer also includes maintenance services, process optimization and reduction of environmental footprint.

More information: www.fivesgroup.com

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