

## **PRESS RELEASE**

### **BIG in JAPAN: Argo-Anleg delivers innovative H2 tank system "ICE" for groundbreaking KEYOU-Komatsu project in Japan**



**Argo-Anleg GmbH is providing a key technological component for a pioneering hydrogen project. The Munich-based hydrogen expert KEYOU and the world's second-largest construction machinery manufacturer<sup>1</sup>, Komatsu, based in Japan, have jointly developed the world's first 12-cylinder hydrogen engine (ICE) for a large dump truck.**

The proof-of-concept tests that have now started at the Komatsu plant in Ibaraki (Japan) are intended to lay the foundation for the future development of hydrogen-powered construction and mining machines. In January 2025, the first firing of the vehicle marked the start of proof-of-concept tests at the Komatsu plant in Ibaraki, which will pave the way for the development of further hydrogen-powered construction and mining machines. Komatsu's goal is to reduce CO<sub>2</sub> emissions by 50% by 2030 compared to 2010, and the Japanese company aims to be completely climate-neutral by 2050.

In cooperation with the two companies KEYOU and Komatsu, Argo-Anleg delivered a state-of-the-art 700bar hydrogen tank system for the first hydrogen-powered dump truck at the end of 2024. The specially developed tank system from Argo-Anleg is installed next to the driver's cab and stores up to 87.6 kg of hydrogen at 700 bar and meets the highest requirements for safety, robustness and efficiency. The transport from Germany was preceded by months of preparation, as it was apparently the first of its kind by air freight.

Extensive proof-of-concept tests are currently underway, which will serve as the basis for the further development of hydrogen-powered construction and mining machinery. Hydrogen offers a clean, efficient and safe alternative to fossil fuels, particularly in the demanding environment of large machines.

### **First project Feedback from partners**

The specially developed tank system from Argo-Anleg supports a storage capacity of up to 87.6 kg of hydrogen at 700 bar and meets the highest standards of safety, robustness and efficiency. Jan Andreas, Managing Director of Argo-Anleg GmbH, made support for the "first refuelling" a "top priority" and emphasized the importance of the project:

*"Our technology plays a key role in enabling us to offer flexible solutions for different areas of application. The current project impressively demonstrates how efficient and safe our solutions are, even under extreme conditions."*

Markus Schneider, COO and CTO at KEYOU, commented on the cooperation between KEYOU and KOMATSU to date:

"We are all the more pleased to now be able to officially talk about our collaboration, which has always been characterized by mutual trust and a meeting of equals." <sup>2</sup>

Argo-Anleg is therefore particularly proud to be recognized as a supplier and partner and to be one of the few to be named.

"As for including Anleg's name in KEYOU press release, I would be happy to offer my LIMITED support in obtaining approval within Komatsu, because I really think Anleg is a very important partner to us." - Maeda-san, Team Manager Komatsu Ltd. in an e-mail inquiry from Dirk Fischer, Sales Manager and here as Key Account - at the same time overall project manager - of Argo-Anleg.

He equates this with a "second accolade - after the delivery of a tank system to another major player in the market in 2024", in order to assess the high esteem in which both companies are held. This also shows that the company is on the right track to increasingly focus on so-called "ICE" concepts in addition to fuel cells. Fischer continued.

ICE stands for "internal combustion engine", which is the same as an internal combustion engine. The only difference is that hydrogen is "burned" here.

Argo-Anleg and its team have once again proven that they are the right partner with the necessary experience and background in the "ICE" sector.

Komatsu writes further in its publication: "Compared to batteries and hydrogen fuel cells, the use of hydrogen combustion engines in construction and mining machines has the advantage that they are relatively inexpensive, as the drive components of existing diesel-powered machines can be used without replacement." <sup>3)</sup>

## **Infrastructure - an important key to success!**

Large machines and especially construction vehicles do not drive to the filling station. They go to the construction site or the mine. Argo-Anleg has various solutions for this in its portfolio. In particular, mobile filling stations and storage solutions. As large construction machines in particular have a high energy requirement, Anleg can refer to the recently published press release. H2Tank-Tainer 4)

With the developed © H2Tank-Tainer (20ft MEGC's for storing 500kg hydrogen @ 500bar), Argo-Anleg has a flexible storage solution that is suitable for a wide range of applications - from heavy-duty transport to stationary filling stations - for example in the construction sector, road construction or mines to maritime applications.

The successful implementation of this project also sends an important signal ahead of the upcoming bauma trade fair in Munich, which only takes place every three years - the world's leading trade fair for construction machinery, building material machines, mining machines, construction vehicles and construction equipment<sup>5)</sup>, where the focus will be on emission-free machines and innovative technologies. An "ICE" solution from Argo-Anleg can also be found there.

## **About KEYOU GmbH**

KEYOU, a Munich-based high-tech company in the clean mobility sector, specializes in the development of hydrogen engine technologies. KEYOU has developed specific H2 components and combustion processes that can be used to cost-effectively transform conventional engines into emission-free hydrogen engines - without the need for major modifications to the basic engine. The H2 vehicles are classified as zero-emission according to EU standards and are therefore exempt from tolls.

## **About KOMATSU Ltd.**

Komatsu is one of the world's leading manufacturers of construction and mining machinery. Their cooperation with KEYOU / Argo-Anleg strengthens the vision of an emission-free future and proves that safe hydrogen technologies from German engineering are not only technically but also economically attractive.

## **About Argo-Anleg GmbH**

Argo-Anleg GmbH, based in Wesel, Germany, is a leading provider of hydrogen storage and logistics solutions. The company develops and produces state-of-the-art H2Tank containers that enable an efficient and sustainable hydrogen supply for maritime, industrial and mobile applications. Through continuous innovation and close cooperation with partners, Argo-Anleg is setting new standards in hydrogen logistics.

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Have we piqued your interest? Would you like to find out more about Argo-Anleg hydrogen technologies? Get in touch with us and follow us on our website or on social media:

Sources:

1) Largest construction machinery manufacturers worldwide by market share in 2023

Source: <https://de.statista.com/statistik>

2) KEYOU press release dated 11.03.2025

Source: <https://www.keyou.de/news-and-blog/keyou-develops-hydrogen-powered-dump-truck-for-global-construction-equipment-leader-komatsu>

3) Press release KOMATSU from 19.02.2025 (Note: Quote translated into German)

Source: [https://www.komatsu.jp/en/newsroom/2025/20250219\\_1](https://www.komatsu.jp/en/newsroom/2025/20250219_1)

4) Press release Argo-Anleg from 21.02.2025

Source: <https://www.argo-anleg.de/grossauftrag-fuer-argo-anleg/>

5) Source: <https://bauma.de>

## H2 dump truck

