

“Green Hydrogen at DLR Lampoldshausen – Extension of the Existing H2 Infrastructure”

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Abstract: At the site Lampoldshausen the German Aerospace Center (DLR) operates on behalf of the European Space Agency (ESA) test facilities for rocket propulsion and their corresponding supply facilities for rocket engine testing for the Ariane launcher family. In addition DLR is operating test facilities for its own research and technology program.

An extensive media supply infrastructure for the test facilities is used since decades, the main aspects for the operation are here the supply with GN₂, Helium, GH₂, LH₂ and LOX.

In the framework of the ongoing projects H2orizon and Zero Emission green hydrogen is produced using wind power. The integration of the new systems into the existing hydrogen infrastructure provides more flexibility without reducing the current performance characteristics. A new electrolyzer for additional GH₂ production, or a liquefier and new consumers will be established and this results in new additional requirements for the supply system.

The paper gives information concerning the operational concept including the tailored extension of the existing Hydrogen Supply infrastructure adapted to the needs of the new systems and the development of the new systems, and the extension of the existing hydrogen infrastructure. The central responsibility and controllability of the processes should be retained.