



DATA e-pump

DATA-BASED AUTOMATION AND DRIVE TECHNOLOGY FOR EFFICIENT PUMP SYSTEMS

DURATION: 50 MONTHS

 TECHNISCHE HOCHSCHULE NÜRNBERG
GEORG SIMON OHM

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Pump systems have a very wide range of applications worldwide and therefore require a correspondingly high proportion of the total available power. Automation technology has the potential to save a significant amount of this power without changing the design of the systems. The wide range of applications for pumps also means that the pump system components can be arranged in many different ways. The possibilities this presents for improving energy efficiency, however, are often disregarded, and pumps are not operated in an optimal way. The "Data-based automation and drive technology for efficient pump systems" project aims to provide methods and tools that will enable energy efficiency to be enhanced without changing the systems or pumps themselves.

Project structure

This project will examine more closely the process engineering, drive system technology, and control engineering of the pump systems in order to improve them. This will allow new and innovative standard controllers to better meet process requirements for dynamics and efficiency. Model-based condition monitoring will allow non-measurable system variables to be estimated and observed. Optimized process engineering and intelligent drive systems will help PROJECT LEADER improve overall system efficiency.

DATA e-pump: **Efficient process management, efficient automation, efficient drives**

Project aim

The aim of the project is to transfer technologies and knowledge regarding the efficient operation, simplified planning, and more cost-effective automation of pumping systems in small and medium-sized enterprises, preferably from the region of northern Bavaria. It is directed at pump operators, who will benefit from the increased efficiency of their systems,

manufacturers and suppliers of automation and drive components for pump systems, planning companies, and system integrators. The technologies provided will allow these parties to establish their market position and develop new products and new areas of business, such as retrofitting.

The cooperation partners are:

- AMANN GmbH Automatisierungstechnik und technischer Industrieservice
- APE Engineering GmbH
- Artschwager & Kohl Software GmbH
- Astute Logic GmbH
- ATM Anlagentechnik und Maschinenbau AG
- Baumüller Nürnberg GmbH
- FlowChief GmbH
- GESTA Gesellschaft für Elektronische Steuerungs- und Antriebstechnik mbH
- GTI-process AG
- GTI-control mbH
- HEITEC AG
- Elektro-Hofmockel GmbH & Co. Elektroanlagen KG
- Iba AG
- IPKS GmbH
- Isa industrieelektronik GmbH
- IVK Schaltanlagen und Systemtechnik GmbH & Co. KG
- LEGER GmbH Pumpen und Regelungstechnik
- PELETEC Gesellschaft für Automatisierungstechnik mbH
- Pfenning Elektroanlagen GmbH
- ProFluxx GmbH
- Richter Steuerungstechnik GmbH
- SAR Elektronik GmbH
- Schodo GmbH
- SPANGLER GmbH
- Trips GmbH
- Ubh Software & Engineering GmbH
- Wolf Meßtechnik GmbH

PROJECT LEADER

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