

Festo provides international training expertise for the water sector at WISA 2014

This year's Water Institute of South Africa's (WISA) 2014 Biennial Conference was hosted in Nelspruit from 25-29 May 2014. The meeting was the ideal forum at which to present the results of the international Festo-GIZ project in water management.

The Festo-GIZ project began in 2011, when a partnership was formed between Festo Didactic and the GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) to address the water and wastewater sector in South Africa as a pilot study designing training modules and course material for water professionals. Festo Didactic, together with the Institute for Urban Water Management from the University of Stuttgart worked on the course material as well as a train-the-trainer programme. In conjunction with the University of Pretoria and The Water Academy the modules were implemented and evaluated in line with an experiential training methodology.

Prof. Dr.-Ing. Heidrun Steinmetz, the Chair of Sanitary Engineering and Water Recycling from the University of Stuttgart, Germany spoke on Resource Orientated Sanitation, stating that wastewater is not waste, but rather a resource. She showed that the water demand of the world is steadily increasing and that we need a paradigm change to address this in the future. In addition, Steinmetz showed data on some resources which are currently under pressure such as nitrogen, phosphorous and potassium as well as water. Her message is that all of these could be retrieved from wastewater through new sanitary engineering methods to save costs, recycle energy and conserve our resources.

It is from this perspective that the modular training rig called the Environmental Discovery System (EDS®) Water Management was developed, teaching current and future water professionals how to run water and wastewater treatment plants in a sustainable way and optimise resources. Ms Yvonne Salazar, representing Festo Didactic GmbH presented on the results of the Festo-GIZ development partnership and the success of the EDS® Water Management.

Proving the success of the project, Messer's Carl Sandrock and Paul Sonnendecker from the Department of Chemical Engineering at the University of Pretoria presented on "Teaching Open Loop Dynamic of a High Tower using the EDS® Water Management equipment of Festo Didactic". Third year students were able to interact with a working real-time system and learn the process dynamics beyond simulation. Results of testing before and after using the experiential learning showed an increased understanding amongst the students.

Mr Peter Maurer, head of the wastewater treatment plant at the University of Stuttgart, did a hands-on presentation to an enthusiastic audience on the sand filter extension of the EDS® Water Management Equipment. As one of the participants explained, "For the first time we can see what is going on inside, usually it (*the equipment*) is too big and one cannot see inside".

Mr Horst Weinert, Festo Didactic Manager for South Africa, stated that "The results of this project are extremely encouraging, both for the local water industry but also for other countries who need to train water professionals to manage and protect their water resources into the future."