Control of didactical systems (E6.2.2.4)

E6.2.2

COM3LAB MUTLIMEDIA: CONTROL TECHNOLOGY

E6.2.2.4
Control of didactical systems

Cat. No.	Description	E6.2.2.4
700 8201	COM3LAB Course: Control Technology I	1
700 83	COM3LAB Course: Control Technology II	1
700 020	COM3LAB: Master Unit	1
700 022	Set of Safety Cables (2 mm, 16 Qty., 6 x 30cm & 10 x 15 cm)	1
688 129	Mains cable with hock-proof plug and cold connector	1
700 00CBT	DVD: COM3LAB Software	1
500 851	Safety connecting leads, 32 A, set of 32	1
501 511	Set of 10 bridging plugs, black	1
568 222	LIT: Fundamentals of Automatic Control Technology II, Vol. 2	1
726 09	Panel frame T130, two-level	1
726 86	DC-Power Supply ± 15 V/3 A	1
734 111	Set of machines 10 W	1
734 121	Digital Temperature Controlled System	1
734 265	Digital Liquid Controlled System	1
	additionally required: 1 PC with Windows 7/8/10	

Liquid control system

In this project the liquid level measurement is used in order to maintain a preslecetable filling level height with a control loop. In the process, the filling level is controlled by the digital controller of the COM3LAB control technology. The system is very clear and shows the interplay of reference and actual value on closed control loops in didactic form. Filling level and flow can both be examined on one unit.

Temperature controlled system

The task is to control the precisely defined temperature profiles for the casting metal in its housing, in order to keep it constant. These temperature profiles are set by using the thermally quick temperature control system. The good control dynamics shorten the measuring time. The temperature control system can be actively cooled via the COM3LAB control technology and the control behavior can be analyzed using switchable disturbance variables.

Set of machines

With the course COM3LAB control technology, the output voltage of the generator is kept constant even when changing the load. The set of machines used here enables a multitude of experiments to be carried out. With the virtual laboratory of COM3LAB, the step response of the system can be recorded, the optimum control parameters identified or timeline diagrams of the controlled system recorded.

Experiments are operated and evaluated with COM3LAB CBT.