Continuous Automatic Control - CAC

This laboratory is designed to study processes and controllers suitably combined to simulate and to study the most common problems related to the Continuous Automatic Control. The analysis of the interactions between controllers and processes is complicated by the possible presence of noise; sometimes, the latter can trigger a series of oscillations with consequences, potentially serious, for the process. In this configuration, the student can study the causes of the above mentioned instabilities, in order to find possible solutions.

This trainer has a modular structure and it consists of didactic panels installed on a vertical frame. It is supplied with a theoretical and practical manual. The modularity of this didactic system can give the students a direct and immediate approach to the topics, offering the opportunity to study various subjects, performing several experiments as following:

- Regulación P de un proceso de tipo P
- Regulación P de procesos del Iº, 2º, 3º y 4º orden
- Regulación I de procesos del 2º orden y de tipo I
- Regulación P, PD, PI, y PID de un proceso de orden elevado: estabilidad y optimización
- Regulación P, PD, PI, y PID de un proceso de orden elevado: predisposición de los parámetros según Ziegler-Nichols (método dinámico)
- Regulación P, PD, PI, y PID de un proceso de orden elevado: predisposición de los parámetros según Chine-Hrones-Reswick (método estático)
- Regulación P, PD, PI, y PID de un proceso de orden elevado: configuración paralela y en serie

AUTOMATIC CONTROL TECHNOLOGY

List of modules for experiments:

No	EXPERIMENT	DL 2613	DL 2614	DL 2622	DL 2670	DL 2671	DL 2672	DL 2673	DL 2674	DL 2675	DL PS-MODE	DL PP-MODE	DL ACTSW	DL 1893	DL 115ACT	DL 2100-3M
											MODULES					
1	Regulation P, Process type P	1	1		1			1		1			1	1	1	1
2	Regulation P, Process of 1st order and superior	1	1	1						2		1	1	1	1	1
3	Regulation I, Process 2nd order	1	1			1		1		1		1	1	1	1	1
4	Regulation P, PD, PI e PID process of high order	1	1	1						2	1	1	1	1	1	1
5	Ziegler-Nichols method	1	1	1						2	1	1	1	1	1	1
6	Chien-Hrones-Reswick static method	1	1	1						2	1	1	1	1	1	1
7	Parallel and series configuration	1	1		1	1	1	1	1	2		1	1	1	1	1
8	**TOTAL**	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1