REPORT

Topic: Modular Production System and CIROS software (Hands-on experience)

Venue: Fluid Power System Laboratory

Date and Time: 06/10/2023, 9:00 am

The training person was from **Didactic Services Ltd** which is the **Festo Official Partner** - Supplying **Festo Didactic** teaching equipment.

First, he started with,

- Basics of pneumatics
- Basics and operations of CIROS software
- Basic operations of Industrial based conveyors which are software operated

The overall session is summarized as follows:

CIROS® **Studio** is the professional tool for creating simulation models. Used by industry, this powerful development platform unites, in one common interface, three essential tools Simulation, Modelling, and Programming. 3D modelling based on standardized import filters for external CAD systems:

3D real-time simulation, including simulation of physical effects, transport simulation, simulation of hose connections and energy chains, error simulation, and sensor simulation. All 3D objects are controlled by an integrated virtual control systems via mechanical or electrical interfaces, allowing realistic experiments and analyses:

- Transport simulation is used for the flexible design of any transport process and is a very powerful extension of the core of the 3D simulation.
- Collision detection through colour change or warning messages with/without acknowledgement. Simple selection of the objects that are to be checked for collision.
- Sensor simulation: Almost all sensors, from the inductive sensor to the camera, are reproduced with their physical characteristics.
- Error simulation: Creation of error states as learning scenarios for strategic troubleshooting and rectification of operating errors.
- Multitasking of virtual control systems: Process models can be controlled in parallel by a number of robots and/or PLCs.







