

A Report of
TEQIP-II Sponsored Workshop
On

“Advanced Training Program in Industrial
Automation Using PLC & SCADA”

16-17 March 2017

Organized Jointly By

The Institution of engineer's student's chapter
Mechanical and Production Engineering
And III Cell

BVM Engineering College (An Autonomous Institution)

Managed by Charutar Vidya Mandal,

Vallabh Vidyanagar, Anand, Gujarat, India-388120

Objectives of the Workshop:

Automation is basically the delegation of human control function to technical equipment. It is the use of control systems such as computers, PLCs, Microcontrollers to control machinery and processes to reduce the need for human sensory and mental requirements as well.

Industrial Automation i.e. to “Automate Industry” is the basic need of almost every type of manufacturing and production unit today. Food/ Beverage, Metal, Mining, Power, Textile, Petrochemical, Machine Manufacturing, Automobile etc are the few examples where we see the automation today.

The main objective is to make the aspiring engineers acquainted with the conceptual as well as practical knowledge of the industrial automation & latest technologies being used to achieve industrial automation. The idea of organizing this workshop is to inculcate the basic fundamentals of automation in the students and provide them with a platform to work on, in the near future. The most used guiding force behind an automated industrial plant is a “programmable logic controller” generally known as a plc. PLCS along with certain other necessary ingredients like sensors, motors, actuators, valves, conveyors, boilers, SCADA systems, computers & many more, makes a real automated manufacturing plant.

As per an analysis by department of small scale industrial development, in India only 40 to 50% industrial plants are using one or another type of automation. There are very less fully automated industries in India. But to compete the real global needs, to produce the best quality products & to deliver the orders at right time with right cost companies are now automating there plants. Trend of automating an industrial plant is increasing at a rapid rate. Right now there is a big gap between the need and the real number of automation engineers.

Registration:

The Workshop began with the Registration process on 14th March 2017. The registration was arranged on the registration desk in front of BVM Mechanical Department for the participants of various level and branches. Total 101 student participants had registered for the workshop.

Inaugural Function:

The Inaugural Function of the workshop was held on 16th March 2017, 09:30 am. The training program was inaugurated by lighting the holy Deep with the esteem presence of Dr. Indrajit Patel, Principal BVM, Dr P M George, HOD, Mechanical Engineering Department, Dr Amit Trivedi, HOD, Production Engineering Department, Prof B S Patel, Convenor, IE(I) Students Chapter, Prof J N Jain, Prof Ansu Pande, trainer, Technoglobe Hub, New Delhi, Harshil Jani, President, Harsh Vora, Secretary IE(I) Students Chapter.

All the dignitaries presented their views about the program.

Workshop:

All the students bring Laptop and SKDA software installed in all.

First session on 16-03-2017 of three hours' 10.30 pm to 1.30 pm workshop and Second session for three hours 2 pm to 5 pm.

First session on 17-03-2017 of three hours' 10 pm to 1 pm workshop and Second session for three hours 2 pm to 5 pm.

Following Topics In Software Covered:

- 1) Presentation on Recent Trends in Industrial Automation & PLC-SCADA
- 2) Introduction to Automation
- 3) Why We Need Automation
- 4) Where Automation?
- 5) Evolution In Industrial Automation (A Brief History)
- 6) Different Type Of Industrial Control Mechanisms)
- 7) Introduction To PLCs
- 8) PLC Advantages Over Microcontrollers
- 9) Area Of Applications
- 10) DATA Flow During Automation
- 11) Motor Drives Introduction & Their Need
- 12) Sensors Introduction & Their Need
- 13) HMI Introduction & Its Need
- 14) SCADA Introduction& Its Need
- 15) Detail study of PLC & SCADA
- 16) PLC I/Os Basics, Burning & Interfacing Concepts
- 17) Allen Bradley & Rockwell Automation's Details
- 18) Brief Description To Input/ Output Pins Of Micrologix-1000
- 19) Ladder Diagram Basics
- 20) Introduction To RSLogix
- 21) Downloading A Ladder Program In PLC Using RSLinx.
- 22) How To Take Input From Panel
- 23) How To Give Output To Panel
- 24) Running First PLC Application.

Valedictory Function:

The Valedictory Function of the workshop was held on 17th March 2017, 5 pm onwards.

Dr P M George, HOD, Mechanical Engineering Department, Prof B S Patel, Convenor, IE(I) Students Chapter, Prof Ansu Pande, trainer, Technoglobe Hub, New Delhi, Harshil Jani, President, Harsh Vora, Secretary IE(I) Students Chapter remain present in this valedictory function and give their remarks. Many participants give their feedback. The workshop was very interesting and useful in their career. Also suggested to organize this type of workshop and conferences in future.

Dr. Indrajit Patel, Principal BVM, Dr P M George, HOD, Mechanical Engineering Department, Dr Amit Trivedi, HOD, Production Engineering Department, Prof B S Patel, Convener, IE(I) Students Chapter continuously monitor and give their valuable suggestions during the workshop. Workshop concluded with National Anthem.

OUTCOME:

By the end of this workshop the students will become aware about the basic Knowledge of Industrial Automation, PLCs and their relevant module. Certificate of Participation given to all the participants.

Photo gallery









News Paper Report:

