



# Instrumentation - Machinery Monitoring System & Control Valves

Dec 13 - 16, 2021

(4 - Day Technical Program)



FAUJI FERTILIZER COMPANY LTD.

[www.ffc.com.pk](http://www.ffc.com.pk)

## Benefits:

The training workshop is designed to share our knowledge with our colleagues from the local industry.

Program comprises of 2 parts; highly useful for all plant personnel dealing with the operation and maintenance of control valves as well as high speed machinery vibrations. The course is designed for both engineers as well as experienced technicians.

## Our Approach is Interactive & Personal:

Prepared directly by instrument industry engineer, training incorporates a hands-on approach, with interactive lectures, case studies, visual demos, group discussions more of a forum of technical executives; an environment quite different from typical training institutes.

All participants are invited to utilize the rich experience of the instructor to its maximum by discussing their own plant cases for general benefit of the class.

## Workshop Structure:

A day wise breakup of the program is included for a total duration of 4 days.

## Our Inherent Expertise:

FFC has now been involved with imparting training to the local industry since more than a decade at our plant. Our workshop faculty are our brightest engineers selected from our running plants to deliver relevant and practical knowledge to our colleagues from other industries.

This training workshop is now being conducted at our Head Office in Rawalpindi by highly experienced technical experts.

## Target Audience:

This workshop is intended for:

- Instrument Engineers
- Maintenance Engineers
- Operation Engineers
- Process Engineers
- Instrument Technicians

## Instructor Profile

Mr. Aftab Ahmed Mazari holds vast practical experience of 43 years as an Instrument Engineer. He started his career from Pakistan Steel and worked with them for 10 years. Then joined Fauji Fertilizer Company and retired with an enriched experience of 30 years.

Mr. Mazari also holds wide experience of Instrument consultation and training and has delivered courses to local as well foreign clients including SABIC KSA, and local multinationals like ENI, Lotte, BHP, Unilever, OMV etc.

He has developed various training aids for instrument engineers/ technicians which include simulators (training rigs), Vibration Simulator, Speed Simulator, Vibration Switch Simulator etc., and also cut-away models of Control Valves, PSVs, SOV, Pressure Regulator, Temperature Indicator, Trip Relay etc.

Mr. Mazari has also authored numerous books for Instrument / Operations crew which are referred to by instrument & operation personnel in various plants in Pakistan.





## Day One:

### \* Machinery Monitoring System

- Machine Vibration
- Severity, Units
- Sensor Types
- Frequency
- Displacement
- Amplitude
- Rod Drop
- Barring
- Static Charge
- Axial displacement Techniques
- Journal/Thrust bearing Temperature Indications
- Speed Sensors

## Day Two:

### \* Machinery Monitoring System

- Practical session at simulator
- Hands on experience of sensor installation , trouble shooting, reading different frequencies levels and its conversion to speed
- Creating different radial Vibration and Axial Displacement indication.
- Identification and installation of radial vibration and axial displacement probes.
- Practical session for using combination of extension cables, probes, proximitors (Oscillator Demodulator) and importance of their right selection.
- Practical session for installation of

thermocouples at journal & thrust pads.

- Physical demonstration of different cable length of Proximitors, length sizes of extension cables, thread sizes and shape of sensors (Probes).
- Trouble Shooting, Case histories and Question-Answer session

## Day Three:

### \* Control Valve

- Definition & Function
- Major Parts, Terminology
- Types of Actuators (Pneumatic, Hydraulic, Electric, Manual, Direct / Reverse Action, Sliding / Rotary)
- Valve Bodies

## Day Four:

### \* Control Valves

- Bonnet (Type, Material, Packing)
- Trim
- Positioner and its accessories
- Maintenance
- Control Valves Overhauling
- Trouble shooting
  - Hunting
  - Slow Response
  - Gland Packing Leakage
  - Diaphragm Leakage
  - Tubing Problems
  - Calibration
- Demonstration at cutaway models

## Workshop Dates :

The four-day training workshop will be held from 13 - 16 December 2021.

## Venue:

The training will be conducted at FFC Head Office, SONA Tower situated opposite Pearl Continental Hotel (PC) on Mall Road in Rawalpindi Cantonment.

## Training Fee:

The fee for four (04) - day training program is Rs. 30,000/- (excluding tax) per participant.

## Discounts:

Discount of 10% available for all nominations received before 15<sup>th</sup> Nov, 2021.

Group discount of 10% for 3 or more nominations from an organization.

## Lunch & Refreshments:

Refreshment breaks during workshop along with lunch at our cafeteria during the 4 workshop days are included in cost.

## Registration:

Please fill in our application form for registration and email at [techservices@ffc.com.pk](mailto:techservices@ffc.com.pk). Confirmation will be sent within one week of registration.

## Payment Mode:

Payment is due upon receipt of the acceptance letter along with the invoice. Please ensure that the payment reaches the office before the start of the program. Our preferred mode of payment is by

cheque / banker's draft payable to Fauji Fertilizer Company Limited.

Please send the cheque / draft to:

Technical Services (HO),  
Fauji Fertilizer Company Ltd,  
Sona Tower, 156 - The Mall, Rawalpindi,  
Tel: +92-51-8454840



## Cancellation/Substitutes & Refund:

In case a registered participant is unable to attend, please inform at least 2 days before the workshop for any substitute participation. Cancellation is free up to 7 days before workshop start date (except for an application processing fee of Rs. 5,000). A refund will not be possible after that or in case of no show.

## For Queries Contact:

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