

# Prochem Training Group

PRINCIPLES OF PIPING DESIGN FOR THE PROCESS INDUSTRIES



## *Process Piping represents the veins and arteries of the Process Industries Intensive Training gets to the heart of the matter*

A four-day course covering all aspects of Process Piping Design presented by John Garvin and Pat O'Reilly of the Prochem Training Group. This course is a must for all persons with responsibility for design, implementation or operation of process projects in the chemical, pharmaceutical, food and beverage industries.

The objective of this course is to upgrade the existing knowledge of piping designers, mechanical supervisors and process engineers in process and piping design. The training will focus on standards required for the heavily-regulated pharmaceutical and food industries.

### **What will be covered:**

- Process Engineering Basics
- Principles of Piping Design
- Equipment Arrangements
- Piping General Arrangements
- Piping Isometrics

### **Who Should Attend:**

- Piping Designers
- Mechanical Supervisors
- Process Engineers
- CAD Technicians
- Draftsmen

### **When:**

Four-day intensive course 9:00 am - 5:30 pm each day

### **Costs of the Course:**

This course is funded by the FAS Competency Development Programme.

### **Contact Details:**

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## Process Flow Diagrams (PFDs)

- Purpose of PFDs
- Symbolism and Conventions for PFDs

## Piping & Instrumentation Diagrams (P&IDs)

- The purpose of P&IDs
- Stages of development of P&IDs
- Symbolism and conventions for P&IDs



## Equipment Specifications & Datasheets

- Standard specifications for vessels, pumps, heat exchangers
- Standard datasheets for vessels, pumps, heat exchangers

## Pipe Sizing & Liquid/Gas Properties

- Application of standard tables and rules of thumb for pipe sizing
- Finding and applying liquid/gas physical properties

## Equipment General Arrangements

- Principles of plant layout
- Access for operator and maintenance

## Piping General Arrangements

- Principles of piping design
- Layout, spacing and support of piping systems



## Piping Isometric Drawings

- Design & drafting of piping isometrics
- Material take-offs



## Equipment Demonstration

- Application of equipment demonstration to practical design



## Details of the Trainers

John Garvin has over 30 years experience as Project Manager and Senior Process Engineer in the formulation, design and construction of chemical, pharmaceutical and environmental process plants in Ireland and the US. John's client list includes Schering Plough, Eli Lilly, Pfizer Pharmaceuticals, Wyeth and Glanbia.

Pat O'Reilly has over 30 years experience as a Senior Piping Designer and Construction Supervisor in the process industries including experience with Schering Plough, Merck Sharp & Dohme, Glanbia, Diageo, Bristol-Myers Squibb and Wyeth.