NEW

DESIGN OF PROCESS SYSTEMS

3 CPD POINTS

SAIChE 436



Presented By: John Broli of Engineers for Africa (E4A)

Course Outline

The main objective is to develop skills of attendees to approach designs of processes as a total systems design including the main equipment in nearly all processes such as Vessels, Pumps, Pipes, and Mixers.
The importance of a total systems approach is evaluated and emphasized and there is also extended consideration given to the key and critical variables that are relevant to the design of total process systems.
Economic benefits are firstly achieved through the evaluation of different materials and assessing the most suitable and thus effective materials for the given process variables, service and functional needs, and potential hazards. Economic benefits are further achieved through optimisation of the design and a deeper understanding of how design approaches and parameters can be leveraged to greater savings and profits

This unique and information packed Course enables those involved in design, projects, and plant operations to analyse and design a wide range of process systems in thorough engineering detail.

This enables more cost-efficient and effective engineering designs aligned with process requirements. Every year we update with new trends and improvements and this Course now covers a range of process systems.
This new information rich course enables those involved in plant operations, general design, and projects to analyse, design and select equipment appropriate for a total systems approach and a range of liquid-liquid or solid-solid processes, or other blends.
This Course first provides special sub-courses covering important aspects of materials fundamentals affecting process systems design, including the importance of avoiding recycled materials, temperature and pressure inter-relationships, and corrosion factors to consider in all system designs.
Also of importance is the training of the material grades and schedules for both metallic and non-metallic piping and the care to understand pressure downrating for temperature. There is also early in the Course a supporting sub-course on Economics in Process Design showing where leverage in savings and profits can be achieved.

The second main section involves training attendees to apply the E4A design algorithm and analytical methods. We discuss in detail the variables stemming from these analyses and how these should be considered in all engineering process designs. We also 'drill down' on the critical variables.
This course then shows how the best approach is treating process design as a total system of process equipment, pumps, pipes and storage or process vessels. These components (the equipment) are considered as sub-systems of the total system being analysed. Design of Liquid based Systems and then Solid and Powder based systems give a thorough guidance to the design steps and points of care and caution in these design processes is covered.
There are also some sub-courses such as vessel designs, motor drive systems design (including VSDs), and installation and platform design - to broaden the course and provide the full sub-systems design considerations. Interesting and unusual case studies are also presented.
The final summary is a series of DESIGN STAGES OR STEPS in a master chart with control checklists, and the appropriate design standards; design limitations are also discussed. Unusual case studies are also presented.

Who should attend?

All qualified engineers, technologist and technicians who want to fully understand the modern need to deal with multi-variable problems and improve their design skills across many areas of current engineering work. We also address the economic impacts of multi-variable problems

Requirements?

All E4A courses are live, on-line (webinar based) and extend over two days.
Quantity discounts are available for group attendances or multiple bookings paid in advance.

All courses include:
a. Interesting pre-reading material is sent to attendees normally two days prior to the start.
b. Course materials are emailed ahead to you for the course, and your personal library.
c. ZOOM links are sent to you 2 days prior to the course start date.
d. The Course framework and time-plan is sent ahead to attendees as an Excel Document enabling easy tracking.
e. Workshops, which include case studies and worked examples, are interspersed with tea and lunch breaks and all materials are sent ahead to attendees for these exercises.
f. A Certificate of Attendance, with CPD points reflected, is provided at the end of the event.

There is a full scope of reading material that extends the Course to enable the award of 3 CPD points and we will provide those details and discuss with attendees how these details can be addressed, at the time of your registration for the Course. The full live on-line attendance remains at 2 days.

Register?

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