



## P103 IMPROVING PUMP, MECHANICAL SEAL AND SYSTEM RELIABILITY

### COURSE DESCRIPTION

In this 3-day course, the participants will review and learn to properly specify, and engineer process pumps. Participants will also review the diagnosis and discuss practical corrective actions to solve centrifugal pump, mechanical seal and system problems. Also, participants will review pump hydraulics and design, and discuss "good pump practices", focusing on extending meantime between planned maintenance.

#### COURSE OBJECTIVES

At the end of the course, participants will have better understanding of the inter-related functions of the centrifugal pump, the system, the operating conditions and mechanical seals

#### COURSE OUTLINE.

- Review the reliability concepts and its measurement, causes of equipment failure and review improvement concepts.
- Brief review of centrifugal pumps, performance curve, and system curve followed by how mechanical seal and air operated control valves works.
- Discuss and review maintenance, operations, engineering and management strategies to improve equipment reliability.
- Review the common causes of centrifugal pump system failure at suction and discharge.
- Review and learn component failure such as impeller, back head, shaft, gland & seal, bearings and coupling.

#### FOR WHOM

Process technician, process supervisors, process engineers, maintenance technician, maintenance supervisors, maintenance engineers and reliability engineers. Maintenance managers, project engineers, design engineers, and engineers responsible for operation and maintenance of centrifugal pumps will also benefit from this course. Participants, who have attended the courses "P101Take the Mystery Out of Pumps and S201Take the Mystery Out of Mechanical Seal" will receive greatest benefit

#### PRE-REQUISITES

None.

#### COURSE LEADER

The course is conducted by experienced professional engineers with years of practical experience on rotating and fluid sealing equipment. The course leaders are all Flowserve approved certified trainers.

#### CERTIFICATE OF PARTICIPATION

Certificates of Participation will be awarded to participants who have achieved 75% attendance for the course.

### COURSE INFORMATION

Course Code	: CT1001
Day / Time	: (9.00 am to 5.00 pm)
Duration (hours)	: 24 hours
Venue	: Chemical Process Technology Centre 81 Jurong Island Highway Singapore 627837
Closing Date for Registration	: One week before course starts

### COURSE ADMINISTRATION

#### Registration

For registration, please complete and return the attached Registration Form together with the appropriate payment by cheque made payable to "Petrofac Training Pte Ltd".

#### Enquiries

Telephone: 6880 2000 Telefax: 6896 7151

Course Fee Subsidy/Payroll Subsidy  
Not Available Yet