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**ONE DAY`S TRAINING PROGRAM ON**  
**Pressure Safety Valve (PSV)**

**28<sup>th</sup> August 2017 at Nagpur**

***Objective of the program:***

PSV design is one of the most important and critical aspects of the Process safety design. With a lot of emphasis being laid by the clients on Process safety now-a-days and mandatory requirements from government bodies, any Process design must fully incorporate an impeccable Process safety design. No Process design can afford any compromise with Process safety.

Hence, adequate knowledge and skill about various aspects of PSV design is imperative for the Process engineers. It is with this objective that this training program aimed at imparting thorough understanding of various aspects of Process design is initiated.

***Learning Outcome:***

The attendees of the training program would be able to acquire following learning' s from the training Program:

- i) Fundamentals of the PSVs
- ii) Importance of the PSV in Process safety design
- iii) How to determine PSV design parameters
- iv) How to identify every applicable upset scenario without missing anyone
- v) How to calculate relieving rate of each scenario
- vi) What are various applicable international codes/standards and how are they applied?
- vii) How to prepare a PSV datasheet accurately and completely

With above learnings, the training is intended to provide following benefits to various stakeholders related to PSV activities:



For Process Design Engineers: Better knowledge and understanding of PSV design, reduced mistakes, minimization of repeat work, better efficiency and productivity, reduced man-hour cost.

For Process Plant Engineers: Better knowledge and expertise of PSV design leading to trouble shooting, identification of root cause of the problems and finding the solutions, effective review of project documents delivered by the engineering consultants/contractors

For Process Managers: In-depth knowledge and expertise of PSV design leading to better team guidance, mentoring and supervision resulting into increased team performance and productivity

For Vendors: Better understanding of Process specifications and design data leading to error-free vendor specification, documents and drawings, reduced approval cycles, timely and flawless delivery

### *Who should attend?*

Process design engineers, Process plant engineers, Process managers in plants and design organizations, Instrument engineers, PSV vendors.

### *Prerequisites:*

Anyone who is a graduate Process or Instrumentation engineer working in a design engineering organization, plant or Vendor Company preferably with minimum 1-2 year's work experience can attend this training program.

### *Course Curriculum (Course Contents):*

- Need for PSV in Process design
- Layer of protection analysis (LOPA)
- Identifying various upset scenarios for protecting a Process system through PSV with example-fire, blocked outlet, control valve failure, thermal expansion, power



failure, instrument air failure, air cooler fan failure, cooling water failure, reflux failure, exchanger tube rupture

- Calculation of relieving rate for various upset scenarios
- Determining the governing scenario for the PSV design
- Defining set pressure, over-pressure and relieving pressure for single, multiple and supplemental PSVs
- Types of PSVs and selection of PSV type
- Various components of back pressure
- PSV size calculation
- Sizing inlet and outlet pipes of a PSV
- Applicability of API and ASME codes for PSV design
- Preparation of PSV Process datasheet

### Certification:

Every successful participant will be awarded a course completion certificate.

### Delivery Methodology (Strategy):

- Introduction and Objective Setting
- Knowledge Presentations,
- Assignments & Exercise,
- Feedback and Assessment
- Discussion and Interaction
- Delivery 9:30 AM to 17:30 PM

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### About CISAT:

Centre For Industrial Solution and Advanced Training is an ISO 9001:2015 certified Training Provider Company managed by professionals with rich Industry and teaching experience. Company involves in professional trainings and been providing training on various topics of Industry interest through various experts associated. More details are available on [www.cisat.co.in](http://www.cisat.co.in).



# Centre For Industrial Solution and Advanced Training

AN ISO 9001:2015 CERTIFIED

(Technical- Electrical/Mechanical/Automation/Chemical, Behavioral & Soft Skill, Safety, Business Excellence, Safety & Energy Audit)

"A complete Training Solution Under One roof"

## Training Facility:

CISAT has International level Training Centre Located in a learning atmosphere at Butibori around 24 KM from Nagpur towards Wardha (Maharashtra Region), India. 18 KM from Nagpur Airport. It is equipped with training facility for upto 40 participants fully air conditioned, LCD Projector, Audio-video, White Board and all facility required for natural activities. It also has facility for Lodging and Boarding in a campus.

## About Nagpur:

Nagpur, situated in a central part of India is a historical city. It is the second greenest city of India and a winter capital of Maharashtra. Nagpur is famous for its oranges, hence called as Orange City. Lots of places are of interest and visit. It is rich with natural gift and surrounded by Forest, Rivers, Dams and hill station like Chikhaldara. It has three Tiger reserves Pench, Navegaon and Tadoba within a limit of 150 KMs.

Nagpur itself rich in terms of picnic spots like Futala Lake, Gandhisagar Lake, Maharajbagh Zoo, Various historical temples, Fort, botanical Garden, Raman Science Park, etc.

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## Registration Details:

**Dates of the program:** 28<sup>th</sup> August 2017 at Nagpur (1 Day).

**Participation fees:** INR 7000/- Per participant (GST@18% extra) (Nonresidential)

**Payment:** ECS/NEFT/DD in favor of "Centre for Industrial Solution and Advanced Training" Payable at Nagpur, Maharashtra, India. Account No: 0509102000003353  
Bank: IDBI, Wardha- 442001, MS, India; IFSC Code: IBKL0000509; Swift Code IBKLINBB007; MICR Code 000259000.

**Venue:** KEC, International Training Centre, Butibori, Nagpur, Maharashtra, India. (18 KM from Nagpur Airport)

*For Registration, please do contact to,*

*We prefer on line Registration through our web [www.cisat.co.in](http://www.cisat.co.in).*

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With Best Regards & Thanks,

**Centre For Industrial Solution and Advanced Training**

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