

Bow Ties in Process Safety

Bow tie diagrams are a powerful tool to graphically display and manage the causes and consequences of incidents and the safeguards that protect against them.

Bow tie analysis (BTA) provides a visually intuitive and readily understood depiction of the causes and consequences of incidents that is easy for non-experts to understand. BTA identifies barriers for the prevention and mitigation of incident pathways. It maps the threats that may lead to a hazardous event and its undesired consequences in a diagram that looks like a bow tie. BTA supports process hazard analysis (PHA) studies such as HAZOP.

Bow tie diagrams have multiple uses. They provide a powerful communication tool to show the hazards and the safeguards that protect against them to stakeholders who may not have a strong technical background, such as front-line personnel and managers. Bow tie diagrams help in identifying safety critical equipment and tasks with links to asset integrity programs and competency and training requirements. Also, they are a useful aid in incident investigation.

This course teaches participants how to construct bow tie diagrams for processes. Detailed guidelines are provided to help ensure attendees construct bow tie diagrams correctly. Many examples and checklists are provided. Attendees practice the material taught through exercises and workshops.

You will learn:

- Meaning of bow ties
- Bow tie terminology
- Benefits of bow ties
- Pros and cons of bow ties
- Potential pitfalls of bow ties
- Relationship between bow ties and hazard analysis
- How to record the elements of a bow tie diagram
- How to address human and organizational factors in bow tie analysis
- Uses of bow ties
- Preparations needed for bow tie analysis
- Procedure for constructing bow tie diagrams
- How to use multi-level and chained bow ties
- How to develop a barrier management program

Who Should Attend:

Personnel responsible for identifying and managing the hazards of industrial facilities.

Prerequisite:

Knowledge of hazard analysis is valuable.

Duration:

Two days, 1.4 CEUs or 14 PDHs awarded

For more information, contact:

training@primatech.com

614.841.9800 | primatech.com