

IMA member profile:

Fauske & Associates, LLC – Risk management services for manufacturers

For more than 30 years, Fauske & Associates, LLC (FAI), an IMA member company, has provided high quality testing services to the chemical process and nuclear industries. As a value-added service to their clients, they also provide a variety of risk management solutions related to combustible dust and chemical processing for reactive hazards. Building on experience serving the chemical industry, FAI is now focusing efforts in the following areas: combustible dust explosions, fire hazards and safety consulting, including incident investigation services.

Combustible dust explosion and fire hazards

FAI offers a wide range of services related to characterizing, preventing and mitigating combustible dust explosions and fire hazards. These include onsite assessments, combustible dust National Emphasis Program (NEP) compliance, testing of dust samples, ignition source evaluation, training of personnel and vent sizing calculations.

Onsite dust hazard assessments

An FAI safety expert will visit client facilities and review the receiving, storage, use, processing and disposal of all “powder” materials. In addition, they will evaluate existing fire/explosion suppression system(s), warning devices and onsite extinguishing capabilities. Possibilities for fugitive dust will also be identified where appropriate. Services include the following:

- Incident investigation for dust explosions/fires;
- Evaluation of compliance with relevant national, local and industry standards;
- Identify electrostatic hazards — grounding and bonding issues;

- Recommendations for risk reduction; and
- Determine dust sampling points and collect samples for dust explosibility testing.

Combustible Dust NEP compliance services

- Preparation for an OSHA Combustible Dust NEP inspection, including appropriate responses to inspectors’ questions
- Documentation review for OSHA Combustible Dust NEP and NFPA requirements
- Testing services available to meet all OSHA Combustible Dust NEP and NFPA requirements

Additional dust hazard services

- Ignition source evaluation
- Vent size calculations for new or existing equipment
- Electrical area equipment classification

- Onsite training of personnel
- Integration of combustible dust hazard management into existing process safety programs for process safety management (PSM) facilities
- Development of process safety programs to manage combustible dust hazards for non-PSM facilities

General safety consulting and Process Safety Management (PSM)

FAI offers a variety of risk management solutions to meet customer needs for many years, and currently provides services for all fourteen elements of Process Safety Management (PSM). Consultation typically begins with a compliance audit or gap analysis, which can be used to identify and prioritize needs. FAI will work with each client to develop a PSM program and create a process that will result in

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compliance and operational improvement. Properly implemented PSM will result in increased knowledge of the procedures which can be utilized to improve safety, reduce operating costs, increase productivity and make organizations more competitive.

Focus areas include the following:

- Process Hazard Analysis and Revalidation (PHA) — audit, lead, coach, review;
- Process Safety Information (PSI) — identification of safe storage and operation conditions;
- Mechanical Integrity (MI) — training, program development, inspection and testing;
- Management of Change (MOC) — determine relevant changes and proper documentation;
- Operating Procedures — review and development;
- Training — be confident that employees and contractors are fully aware of all hazards associated with the chemicals and process that they use on the job;
- Emergency Planning and Response — develop a strategy for notifying emergency responders, emergency shutdown procedures and precautions to protect employees and the public; and
- OSHA Combustible Dust NEP — full range of testing to characterize a sample's hazardous characteristics.

FAI is uniquely qualified to assist in the evaluation of pertinent Process Safety Information required for Process Hazard Analysis (PHA) reviews. We offer a full range of PHA services using a variety of techniques including hazard and operability (HAZOP), "what-if," checklists, Layers of Protection Analysis (LOPA) and Failure Modes and Effects Analysis (FMEA). If a PHA evaluation is not comprehensive or key aspects of the process such as start-up and shut down are not considered, potential adverse consequences could be overlooked.

For revalidating PHAs, some background work must first be performed to verify that the PHA is consistent with the current process. FAI can assist in this effort and evaluate whether the previous PHA is sufficient for revalidation.

There is a benefit to performing a PHA in conjunction with a LOPA, which is a simplified form of risk assessment. It can be used to evaluate scenario risk compared with risk tolerance criteria to determine if existing safeguards are adequate, or if additional measures are necessary. Using a LOPA can improve the efficiency of hazard evaluation meeting by providing a tool to help reach risk judgments more quickly.

For companies that do not manufacture products included in the PSM program, there is a general duty responsibility to provide a workplace free from recognized hazards. As such, both OSHA and EPA have the ability to apply their General Duty Clause which requires that companies operate their facilities

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(including those systems that may have less than threshold quantities of hazardous chemicals or flammables) consistent with industry recognized good practice. At a minimum under the general duty clause, a company should identify and assess impacts of releases of hazardous substances and/or flammables, design and maintain a safe facility to prevent those releases and minimize the consequences of releases that may occur. Increased knowledge of the process can be utilized to improve safety, reduce operating costs, increase productivity and establish competitive advantage. Successful PSM programs involve attention to detail. When implement-

ed properly, this can result in improving the overall efficiency of the systems they operate.

Incident investigation

FAI safety experts are available for consultation to discover possible conditions that led to recent fires, explosions, near misses or incidents. Our experts will review the normal process and events prior to the incident to identify potentially hazardous conditions. FAI can also perform a root cause analysis to establish the initiating cause of the event, assist in identifying scenarios that led to the incident, and ascertain if follow-up testing is necessary to validate the hypothesis. Our process safety experts operate a full service lab that can determine the hazard potential of a given situation. Test capabilities include dust explosion severity, flammability and chemical reactivity (contamination, material incompatibility, loss of power or agitation, additional upset conditions and more). Results can be used to provide litigation support or expert witness testimony.

Additional consulting services

- Relief Vent Sizing Review
- Deflagration Vent Sizing Review
- Reactivity Hazard Analysis Review
- Process Safety Due Diligence for Acquisitions and Mergers
- Root Cause Analysis
- Safe Process Scale-up

IMA member company FAI strives to be your one point solution to address your process safety needs. Contact an FAI representative today to discuss your process safety needs for the services mentioned here and more. Call 877-328-7531 or visit their Website at <http://www.fauske.com>. ■

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