A Method to Identify the Chemical Hazards of Tasks Derived from Abnormal Conditions of Processes

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Abstract

Hazards, which were resulted from operation of improper tasks derived from process abnormal conditions, cannot be identified effectively by the traditional hazard identification methods, such as HAZOP and JSA. A method based on the hazardous information of chemicals to identify the hazards of tasks derived from abnormal conditions of processes was proposed. A checklist for the intrinsic chemical hazard identification and a worksheet for the process/task hazard identification were included in the proposed method. The intrinsic hazards of chemicals can be identified based on the hazardous information of chemicals, such as those provided on SDS. Combining with the enabling condition of the chemical hazards and the possible tasks derived from process abnormal conditions, the tasks derived from process abnormal conditions, which will supply the condition of initiating the chemical hazards, were identified. Based on the identified tasks, the potential hazards of the tasks can be identified by a pre-designed worksheet, and the safeguards and the suggestions can be identified. An example of using the proposed method to identify the hazards of tasks derived from process abnormal conditions was included in this manuscript.