Relational Information System for Chemical Accidents Database(RISCAD) with Analysis of Chemical Accidents by Flowchart

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The Relational Information System for Chemical Accidents Database (RISCAD) is based on the fire, explosion, and leakage accident data related to chemical substance, chemical process, high pressure gas, and explosive. These data have been accumulated by the National Institute of Advanced Industrial Science and Technology (AIST). RISCAD has been developed by AIST and the Japan Science and Technology Agency (JST) from 1999 and released on the web in October 2002. In RISCAD, accident data can be searched by date, location and free words or keywords by activities, equipment, causes, chemical substance names, and type of explosives hierarchized by the experts. Some accident data are linked relationally to the accident progress flowcharts, hazard information of relevant chemicals and additional information such as the reaction process flowcharts, reaction formula, equipment and facility layout. Additionally, it has the functions to reproduce dynamically thermal analysis (DSC) data and accident statistic data on the Web browser. In this paper, the outline and function of RISCAD are introduced and a case study on explosives accident with the progress flowchart is presented.