

Analysis of Accidents in Refrigeration Systems

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Refrigeration safety standards are normally focused on the type of refrigerant used. Studying typical accidents in refrigeration however does not entirely confirm that focus. Spectacular accidents like explosions, and toxic accidents are not so common, partly as a result of the restrictions on the use of flammable and toxic refrigerants. But it is important to be aware that also the HCFCs and HFCs have their risks, especially the risk of suffocation. This study is about identification of accident types, their relative frequencies and their typical consequences and covers hydrocarbons, ammonia and CFC/HCFC/HFC.

The aim has been to gather as much information as possible about accidents in refrigeration systems with different refrigerants. Such information is necessary as a basis for sound regulations concerning the use of all types of refrigerants.

The paper is based on accident statistics from different countries and on a large number of interviews with persons having long experience in the refrigeration industry.