



PL9901457

## DATABASE SYSTEM FOR CHEMICAL INSTALLATIONS RISK ASSESSMENT

The calculation of the probability and consequences of an accidental release of a hazardous substance from manufacturing, transport and storage, may be effectively supported with appropriate computer data bank.

For these purposes the database system for chemical installations risk assessment is created and continuously updated. The system is composed of six main components:

- dangerous substances database,
- process equipment failure database,
- selecting hazard evaluation techniques for chemical installations,
- HAZOP-type procedure of analyses,
- review of computer programs for chemical substances atmospheric dispersion calculations,
- documentation,

each of which contains links to files with databases distributed with respect to the sort of data.

In each main component further detailed information is available. Thus:

- physical, chemical and toxicological properties for 1800 dangerous chemical substances,
- equipment failure rate data for 70 kinds of hardware (characterised as time-related and demand-related),
- detailed flowchart for selecting hazard evaluation techniques that may be used directly or to assist develop own procedure,
- detailed algorithm of HAZOP analysis that may be used directly or to be a guide for such procedure,
- characteristics of 33 computer programmes developed for modelling atmospheric dispersion of accidentally released gases (model type, release type, consider or not topographical data, terrain data etc.)
- zipped documentation (Word 6.0) to download.

The data included in the database system are continuously updated reviewed and verified accordingly to the users suggestions and needs.

Database URL:

<http://www2.cyf.gov.pl/chemia.html>