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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

AQ/T 3034-2010

**Guidelines for process safety management of chemical
corporations**

化工企业工艺安全管理实施导则
(English Translation)

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Foreword

Appendix A of this Standard is informative.

This Standard was proposed by the State Administration of Work Safety.

This Standard shall be under the jurisdiction of the Subcommittee 3 on Chemicals of the National Technical Committee 288 on Safety Production of Standardization Administration of China (TC 288/SC 3).

Drafting organizations of this Standard. China Business Council for Sustainable Development, SINOPEC Research Institute of Safety Engineering (Qingdao), and Shanghai SECCO Petrochemical Company Limited.

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This Standard is issued for the first-time.

Introduction

Petrochemical industry is a high risk industry; all countries, corporations, international or geographical organizations are actively summarizing and searching the safety modes and methods for corporation management. In recent years, as the increasing of foreign sole-venture and joint-venture projects, the management modes and practices of international corporations with outstanding achievements in safety and environmental protection had been known, used for reference, and introduced gradually by domestic corporations, which build-up good management experiences and a set of effective management mode in the process of production and operation. On the basis of reference from safety management mode and management method of technological process in the production process of foreign petrochemical corporations, and in conjunction with the actual conditions in China, this guidelines for process safety management of chemical corporations was formed with a view to provide thoughts and frames for the essential safety management of chemical corporations.

This Standard was prepared on the basis of successful practices of corporations and with high workability. For the convenience of corporation's application, "Application Examples for Guidelines for Process Safety Management of Chemical Corporations" is served as informative appendix of this Standard, and favorable to use for reference of corporations in practice.

This Standard is the standard in conjunction with AQ/T 3012-2008 "Guideline of Safety Management System Implementation for Petrochemical Corporation". Corporations may use this Standard to strengthen the process safety management of management system and enhancement of overall safety performance.

Guidelines for Process Safety Management of
Chemical Corporations

1 Scope

This Standard specifies the elements and requirements for process safety management of petrochemical corporations. It gives application examples of process safety management.

This Standard is applicable to the process safety management of petrochemical corporations.

2 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this Standard. For dated references, subsequent amendments or revisions of these publications do not apply. However, parties when enter in agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 24001-2004 Environmental management systems - Requirements with guidance for use

GB/T 28001-2001 Occupational health and safety management system - Specification

AQ/T 3012-2008 Guideline of safety management system implementation for petrochemical corporation

3 Terms and Definitions

For the purpose of this document, terms and definitions given in GB/T 24001-2004, GB/T 28001-2001, AQ/T 3012-2008, and the followings apply.

3.1 Element

Critical factors of process safety management.

3.2 Process

- b) Chemical principle information of the process;
- c) Maximum design storage content of materials;
- d) Safety operating range (temperature, pressure, flow rate, liquid level or liquid level component, etc.);
- e) Any deviation from the evaluation result of normal operating conditions, include influence on the safety and health of personnel.

Note: Aforesaid process and technology information are usually contained in technical manuals, operation

specifications, operating methods, training materials or other similar documents.

4.1.3 Process equipment information

Process equipment information shall at least include.

- a) Material;
- b) Process instrument diagram (PID);
- c) Zoning plan of electric equipment hazard ratings;
- d) Pressure relief system design and design basis;
- e) Design drawing of ventilation system;
- f) Design standard or specification;
- g) Material and energy balance sheets;
- h) Measurement control system;
- i) Safety system (for example. interlock, monitoring or inhibition system).

4.1.4 Process safety information management

Process safety information are usually contained in technical manuals, operation specifications, training materials or other process documents. Process safety information document shall be incorporated in and managed by corporation's file control system; the latest edition shall be maintained.

Corporations may obtain the required process safety information through the following approaches.