

HUNGARIAN REGULATION ON THE PROTECTION OF MAJOR ACCIDENTS HAZARDS

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ABSTRACT

As a result of the appearance of New Disaster Management Regulations in the year of 2012, a unified Industrial Safety Authoritative and Supervision System was set fully operational on national, regional and local levels. The authors of this article analyses the activities of the Hungarian industrial safety's authority in the field of major accident protection of dangerous establishments involving dangerous substances.

KEY WORDS

industrial safety, protection against major accidents, fire protection, Hungary, emergency situations

Introduction

The European community-level integration of the prevention of industrial accidents looks back to a history of more than two decades in Hungary. In line with the European integration activity and the international obligations of the country the Hungarian Parliament and government has prepared the regulations about the prevention of major industrial accidents. The effective date of the Hungarian regulation is January 1, 2002. One of the triggers of the changes in legal regulations between 2010-2011 serving for the improvement and development of the disaster management system was the strengthening and establishment of more efficient protection against major accidents involving dangerous substances. One of the recent events, like the industrial disaster caused by the damburst of the mining waste reservoir in the outskirts of Ajka on October 4. have contributed to the changes of the disaster management regulations concerning the legal field of industrial safety. [2]

Summary of the implementation experiences and drawing conclusions

Development of regulation of industrial safety in the disaster management system has almost a 20 years history in Hungary. Regulation of industrial safety is mainly based on the legal, institute and task system for protection against major accidents involving dangerous substances. Namely, these regulations form one of the most important branch of the industrial safety management.

In order to prevent the major industrial accidents involving dangerous substances, to reduce the harmful consequences to the environment and health, and to protect people at a high level, the countries of the European Community enacted the Seveso II Directive of the committee on February 3, 1997. [3]

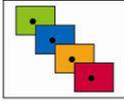
The Accident prevention and Inspection Department of the National Directorate General for Disaster Management (OKF) performed the licensing and authority control activities of the dangerous industrial establishments based on this directive and the approximated national laws. A new branch was established in 2010 as a significant change: Industrial Safety.

The extension of the professional, and authority and supervisory activities of the Industrial safety department happened in 2012, at the date of the independent industrial safety branch. The specialists of the Industrial safety department created the legal regulations and system of institutes that reach over the Seveso II Directive. The Industrial safety department coordinates the activities of four independent branches by managing dangerous establishments, dangerous transports, safety and inspection of vital systems and installations, and management of nuclear accidents. [3]

An independent and uniform industrial safety authority was established in Hungary. The old member countries of the EU were not operating a Seveso disaster management authority, what has quickly proven that handling the prevention and accident management activities by the same organization results in efficient and high level authority work. Using only one authority for performance of the Seveso tasks was also not typical.

The results of the Hungarian authority have proven to the skeptical parties clearly that there is no alternative to disaster management in the field of Seveso.

The Hungarian industrial safety authority ensures professional supervision of the dangerous establishments and activities by creation of the most up-to-date risk-based quantitative risk analysis aspect, by employment of highly trained authority specialists, and by systematic performance of the authority and supervision tasks.



Looking back to the history, BM OKF has introduced the Seveso II Directive in the Hungarian legislation back in 2001, and ensured the personnel and assets for performance of the tasks in relation to the directive during 2001-2003. The authority licensing and supervisory system has been operating since 2002. The stipulations of the Directive have been executed until the date of joining to the EU in May, 2004. An external emergency planning, public information, publicity and a community development system was in operation, among others. The professional and international cooperation tasks of the Helsinki UN ECE Industrial Accident Convention were performed by BM OKF as a competent authority. The coordination with the representation organizations of the operators was continuous at an expert level. The operation of the Seveso defence working committee and establishment of the Molari system was also important. The authority methodology publications, the conferences, professional days and further education all supported ensuring the quality of the professional work. Evaluation of the major accident and incidents, and concluding the experiences determined the development of legal and institute system. The authority represented the interests of the country at the meetings of EU and international organizations. Organization of several EU and international events in Hungary, and involvement of Hungarian specialists in the international cooperation has generated significant level of acceptance to Hungary. The conditions of safe operation are guaranteed in case of 704 dangerous establishments in Hungary, supervised by the disaster management authorities.

Thanks to the legal regulations and institute development activities between 2010 and 2012, a more dynamic and strong industrial safety authority is operating in the disaster management organization since January 1, 2012. There were significant changes in the development of competences and tasks and scopes. The base of establishment of the new system of industrial safety task and tools was the dangerous establishment and transportation supervision activity operating at a high professional standard also acknowledged by the EU in 2010.

BM OKF has an industrial safety consulting committee and a higher level education institute since 2012 who perform establishment and support of the professional and scientific activities.

Regulation on the major accident protection

The legal institutes, the necessary tasks (measures) and the applied system of tools of the legislation about protection against major accidents can be categorized in three main groups based on the period when the tasks are performed. These are: the prevention and preparation period; the emergency management (accident response) period; and the recovery period.

The operator and authority prevention and preparation measures of the laws concerning defense against major accidents are basically categorized in two groups:

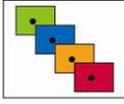
- prevention measures, that serve to eliminate occurrence of a major accident or incident,
- and the consequence mitigating (preparatory type) measures intend to reduce or eliminate the effects of an already occurred incident.

In the following parts, I will examine the Hungarian Seveso regulation in accordance with the above principles.

In accordance with the Disaster Management Act (entered into force in 2012.) requires the operators of dangerous establishments to demonstrate that their activities do not pose an unacceptable hazard to the population, material assets and the environment, and that they made every reasonable effort to prevent major accidents and reduce their effects. Depending on the hazardous impact, the operator can be required to provide data, prepare safety reports, safety analyses or serious damage prevention plan, and an internal protection plan for the site, ensure the conditions for carrying out the responsibilities specified in the internal protection plan, information of the population on the hazardous activities, potential hazards to the population and protection measures taken.

The plants subject to the Disaster Management Act shall assess the realistic possibility, probability, causes and conditions of major accidents on grounds in the documentation submitted to the authorities. These assessments shall describe the external or internal causes of accidents, and the probable stages of the course of accidents. The operator may use any method to identify the risks and assess the risk of major accidents that are used in the international practice and generally recognized by the professional community. The most widespread method used in Hungary is the quantitative risk assessment method.

The operator of a dangerous establishment shall draw up an internal emergency plan meeting the requirements of content and form determined in national legislation to eliminate the consequences of hazards identified in the safety report and safety analysis. The operator shall provide conditions necessary for the accomplishment of tasks defined in the internal emergency plan. The task within the hazardous establishment for limiting the consequences of major accident involving dangerous substances shall be determined by the operator, while the tasks outside the hazardous establishment of the concerned state and municipal organs shall be determined in external emergency plans. An important step in the evaluation of the risk assessments submitted in the safety documentation is to compare the risk indices calculated on the basis of these assessments with the authorization criteria defined in the legislation. The most important authorization criteria are the value for individual risk and social risk. [3]



Operation of licensing, inspection and control system

The most important task on the authority side in relation to the implementation of the regulations is the operation of the authority licensing and supervision control system of institutes, what include the followings.

Authority licensing tasks, whose main elements are: judgment of the received establishment identification reports; requiring compilation of safety documents; judgment of the received safety report, analysis and major emergency management plan, internal emergency plan, including a site inspection in order to examine truthfulness of the safety documents; requiring introduction of preventive and consequence mitigating measures by the operator; assignment of danger zones in the authority resolution. Based on the stipulations of chapter IV of the Disaster Management Act, industrial safety authority licensing tasks occur (1) in the construction licensing procedures of the newly installed dangerous establishments or installations, and in the procedures for performance of dangerous activities, (2) in procedures for repeated performance of dangerous activities, and (3) in case of a major change of an already operating dangerous establishment. [3]

The authority of second instance is the National Directorate General for Disaster Management (Ministry of the Interior), while the authorities of first instance are the regional and capital authorities of disaster management.

The authority inspection of safety documents with the following main elements regular inspection every 5 years in case of safety reports and analyses, and every 3 years in case of internal emergency plans; occasional inspections due to major changes, major accident or incident occurring in the establishment, technical development or development of modern danger identification and impact analysis methods. The regular and occasional inspection activities are accompanied by site inspections, and based on this (according to the decision of the authority) the safety documents or the emergency plans are revised in frames of a licensing procedure.

The authority control of dangerous establishments with the following main elements. Planned authority control, whose types are periodical authority control, what consists of checking the items specified in the safety documents and in the authority resolutions; authority control of the internal emergency plan practices;(supervisory) authority control performed by involvement of a partner authority. Non-planned (occasional) authority controls in frames of a site inspection, including subsequent control based on periodical authority controls; controls based on operator reports (e.g. shutdown of operation, or temporary pause of operation); examination of circumstances of incidents or accidents in frames of a site inspection (emergency site inspection).

Sanctioning activities, that consist of the followings: disaster management penalty activities in case of irregularities and omissions specified by a separate regulatory statute; procedure penalties in frames of an administrative procedure; cancellation of a license and prohibition of performing a dangerous activity; limitation of a dangerous activity by reduction below the lower tier, or its suspension; application safety measures (protection or removal of dangerous substances, etc.) [3]

The so called disaster management tasks of the industrial safety authority is the preparation, review and verification of a settlement external emergency plan; making publicity available (in case of a construction procedure and significant changes); organization and performance of External emergency plan practices (at the assigned establishments); control and evaluation of internal emergency plan practices; follow up of developments in the danger zone; implementation of the related individual disaster management tasks, such as establishment of disaster management monitoring, alarm and information system.

Disaster management higher education in Hungary

The common goal of academic courses at the NUPS university is to socialize those preparing for a career in public service (law enforcement and defense administration) along identical base values, to lay the foundation for the mobilization during their career, and to make everyday cooperation among the different professions easier. [4]

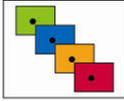
The goal of the education at the department of disaster management is that graduates shall be able to carry out general prevention and authority tasks in the partial fields of general disaster management (prevention of disasters, organisation of response to disasters, restoration, preparation for civil protection) and of fire prevention and fire fighting, technical rescue, fire investigation, related preparation and primary disaster response activities, implementation of prevention and authority tasks related to industrial safety.

It is required from the graduates that they complete their special tasks independently, under the proper management, at the same time they shall also be eligible for being involved into the master-level course education and to be employed for managerial tasks after collecting adequate practical experience. [5]

The facultative specialisations of the basic course on disaster management are: Disaster management operations, Fire prevention and rescue control, Industrial safety.

The new full-time and correspondence course was organised by the Institute of Disaster Management operating as an independent interfaculty institute at the university (NUPC). In line with the three specializations there are three specialized departments and a section in charge of educational organisation operating at the institution.

The precondition of the award of the degree is the completion of the professional practice (8 weeks) in equal parts after the 2nd and 4th semester is closed. Students spend the first part of the professional practice, in line with the specialization, at



the professional disaster management and professional fire department organisations, while 2 weeks of the 2nd part shall be spent at an external (law enforcement, public administration or business) organisation, two weeks in a field selected by the student serving for the preparation for the thesis submitted for degree. For the basic degree at least a general, complex (B2) intermediate-level proficiency examination in English, German or French language recognized by the state or a complex (B2) intermediate-level language proficiency with vocabulary specializing in the professional terminology or equivalent high school graduation examination or degree is necessary.

Summary

The authors of this article shortly evaluated the authority licensing and inspection institute system of the legislation concerning the protection against the major accidents. In summary we can state that the supervision of the dangerous establishments allows high level protection of the life and health, the environment and other assets in Hungary according to the requirements of the EU, the international organizations and the Hungarian Government, and it also promotes public safety in Hungary according to the Fundamental law.

The Hungarian industrial safety authority as part of the Hungarian Disaster Management Organisation have been applied the European regulations (Seveso II. Directive) in Hungary since 2002 (more than 15 years). In accordance with the statements of the national reports of Hungarian Competent Seveso Authority the Hungarian regulations on the major accidents protection are in full compliance with the Seveso II. Directive's regulations.

It also should also be stated that the Hungarian regulations and their appliance by the Hungarian industrial safety authority provide a high level of protection of human life and the environment in Hungary.

REFERENCES

- [1] Balázs BOGNÁR, Gyula VASS, Sándor KOZMA: A BM OKF Országos Iparbiztonsági Főfelügyelőség szakterületeinek bemutatása (Introduction of the National Chief Inspectorate for Industrial Safety MI NDGDM), *Új Magyar Közigazgatás*, 2(2012)/6, 19-27.
- [2] Lajos KÁTAI-URBÁN: Handbook for the Implementation of the Basic Tasks of the Hungarian Regulation on „Industrial Safety”, Nemzeti Közszerológiai Egyetem, Budapest, 2014.
- [3] Lajos KÁTAI-URBÁN, Gyula VASS: Kézikönyv a veszélyes üzemek biztonságsszervezésével kapcsolatos alapfeladatok teljesítéséhez (Handbook for Implementation of Basic Tasks related to the Safety Management of Dangerous Establishments), Nemzeti Közszerológiai Egyetem, Budapest 2014.
- [4] Kátai-Urbán Lajos, Lévai Zoltán, Sibalinné Fekete Katalin, Vass Gyula: Hungarian System for Supervision of Dangerous Shipments. *Journal of Environmental Protection, safety, Education and Management* 3:(6) pp. 36-41. (2015)
- [5] Kátai-Urbán Lajos; Vass Gyula: Kézikönyv a veszélyes üzemek biztonságsszervezésével kapcsolatos alapfeladatok teljesítéséhez (Handbook for Implementation of Basic Tasks related to the Safety Management of Dangerous Establishments).. Budapest: Nemzeti Közszerológiai Egyetem, 2014. 60 p (ISBN 978-615-5491-72-6)

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