THE IMPORTANCE OF INDUSTRY STANDARDS IN TRAINING ACTIVITIES

O.S. Cupsa, T. Popa
CERONAV (ROMANIA)

Abstract

Technical Universities offers a curriculum generalist, leading to the formation of a graduate with basic training. This is the reason that after graduation, the new engineer must attend different masters or postgraduate programs.

This is because with the beginning of activity and involvement in specific activities of the company, the new graduate needs practical and theoretical knowledge of its work.

The paper aims to highlight that for the same job, there may be criteria and different requirements depending on the economic activity.

This is due to specific standards imposed by the industry. Thus the work will make a comparison of the data requirements of industry standards such as those from OPITO - for the offshore industry, STCW, OCIMF, CDI and Intertanko - for the shipping industry, GWO - for the energy industry, the operation of offshore and shore wind turbines, and CompEx - for oil industry. Also we will emphasize the importance of these standards, the advantages and disadvantages of their use. More, we'll provide the offer of courses, and their importance.

Keywords: Training, requirement, industry standard, target, instructor, accreditation.

1 INTRODUCTION

Each training program is carried out, as is well known, using a syllabus (curriculum) designed and developed based on criteria imposed by a commission established by the rule nationwide.

In Romania these committees called ARACIS (academic programs) - The Romanian Agency for Quality Assurance in Higher Education - and ARACIP (for pre-university programs) - The Romanian Agency for Quality Assurance in Pre. On completion of any program, the graduate receives a qualification in order to work in a certain area.

However, there are areas where it is not enough to have a qualification, but there are imposed additional requirements, so-called industry requirements. These requirements cover aspects of industry, with a major importance, to ensure a good performance, high quality and safe.

For our paper, we'll take in discussion four fields covered by the industrial standards in connection with operation of offshore installations, ships maritime transport, wind turbines and petrochemical sector. All of these areas are addressed or will be addressed by our institution.

2 REQUIREMENTS OF INDUSTRY STANDARDS

The four chosen sectors have developed a number of industry specific standards they represent. Usually these industry standards have emerged as a result of regulated requirements, the need of exploitation for certain equipment, but also as a result of events occurring in field.

2.1 Offshore Industry

OPITO has been setting standards for the oil and gas industry since 1991 to help improve workforce safety and competence - over 250,000 people per year train to OPITO standards across the globe.

In partnership with industry stakeholders, OPITO identifies the needs and requirements for new and improved training and competence standards for both onshore and offshore.

Standards are developed by Industry Work Groups (IWGs) comprising industry employers, subject matter experts, regulators, trade associations, OPITO approved training providers and workforce
representatives. IWGs develop the content of an industry standard in its entirety including learning and assessment outcomes, training programme content, staff/facilities requirements and validity periods.

OPITO undertakes a quality assurance role on behalf of industry through robust approval and monitoring processes thereby ensuring that every OPITO approved training provider delivers a consistently high level of training to delegates around the globe. OPITO Industry Standards are available in the following categories: Basic Emergency Response Roles, Specialist Emergency Response Roles, and Technical Roles.

2.2 Maritime Industry

2.2.1 Standards imposed by OCIMF

The Oil Companies International Marine Forum (OCIMF) is a voluntary association of oil companies with an interest in the shipment and terminal of crude oil, oil products, petrochemicals and gas.

OCIMF mission is to be the foremost authority on the safe and environmentally responsible operation of oil tankers, terminals and offshore support vessels, promoting continuous improvement in standards of design and operation.

OCIMF regularly publish sets of rules, guidelines and recommendations that shipping companies must comply.

These documents can be downloaded by each of the members from the OCIMF website.

![Figure 1. Examples of documents published by OCIMF](image)

2.2.2 Standards imposed by INTERTANKO

INTERTANKO (the International Association of Independent Tanker Owners) is a trade association that has served as the voice for independent tanker owners since 1970, representing the interests of its Members at national, regional and international levels. The organization champions an industry dedicated to support global energy networks by delivering safe, efficient and environmentally sound transport services.

INTERTANKO actively works on a wide range of operational, technical, legal and commercial issues affecting tanker owners and operators around the world. It draws on regular and direct contact with its Members and other industry stakeholders to develop and disseminate information and best practice, essential to the tanker industry.

The mission of INTERTANKO is to provide leadership to the Tanker Industry in serving the world with the safe, environmentally sound and efficient seaborne transportation of oil, gas and chemical products.

INTERTANKO regularly publish sets of rules, guidelines and recommendations that shipping companies must comply, similar to those of OCIMF.
2.2.3 Standards imposed by CDI

The CDI is incorporated under the law of the Netherlands as the Stichting Chemical Distribution Institute (CDI) and operates as a non-profit making foundation.

CDI is responsible for the inspection and audit of the global supply chain for the transport and storage of bulk and packaged chemicals. CDI is not a trade association; it is non-profit, non-commercial and free from political influence.

CDI was created by the chemical manufacturing industry, for the chemical industry in 1994 and over the years has gone from strength to strength. CDI is here to serve the chemical company members of CDI and provide their inspection and audit needs in order to provide them with cost effective systems for risk assessment using the best chemical and LPG knowledge available.

CDI-M (CDI-Marine) was created in 1994 by the chemical industry for the chemical industry in order to constantly improve the safety and quality performance of marine bulk transportation for the chemical industry; and to provide chemical companies with cost effective systems for risk assessment, thus assisting their commitment to Responsible Care and the Code of Distribution Management Practice.

The CDI-T (CDI-Terminal) scheme was developed in 1997 and similar to the Marine scheme, its purpose was to improve the safety and quality performance of bulk liquid storage terminals. The major chemical storage terminal companies are participants in the Terminals scheme. Over 20 CDI-T Accredited inspectors, carry out the detailed management and technical inspections of liquid storage terminals in all continents of the world.

2.2.4 Standards imposed by STCW Convention

The key to maintaining a safe shipping environment and keeping our oceans clean lies in all seafarers across the world observing high standards of competence and professionalism in the duties they perform on-board. The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended in 1995 and again in 2010, sets those standards, governs the award of certificates and controls watchkeeping arrangements. Its provisions not only apply to seafarers, but also to ship-owners, training establishments and national maritime administrations.

The convention was adopted by the International Maritime Organization (IMO) in 1978 and came into force in 1984. During the late 1980s, it was clear that STCW-78 was not achieving its aim of raising professional standards worldwide, and so IMO members decided to amend it. This was done in the early 1990s, and the amended convention was then called STCW-95.

The 2010 Manila amendments was intended to include all agreed changes since 1995, address new technology, inconsistencies, interpretations and outdated provisions.

There was particular emphasis on improving control and communication provisions of certification in Chapter 1 and addressing the specific requirements of offshore and short sea shipping. There was also an overall commitment to harmonize the amended STCW Convention, where practical, with the provisions of the 2006 ILO Maritime Labour Convention. Whereas the STCW-78 Convention focused almost entirely on knowledge, the emphasis of STCW-95 has been shifted to practical skills and competence underpinned by theoretical knowledge. The 2010 amendments continued to emphasise competence rather than sea service or period of training. The standard set by the convention applies to seafarers of all ranks serving on sea-going merchant ships registered under the flag of a country party to the convention.

The term “seagoing ships” includes all commercial vessels engaged on domestic or international voyages. The STCW Convention does not apply to seafarers serving on warships, naval auxiliaries or any other government owned or operated ship engaged in non-commercial service; fishing vessels (there is a separate convention covering personnel on fishing vessels); pleasure yachts not engaged in trade and wooden ships of primitive build.

The STCW (95) Convention has already been accepted by all major labour suppliers and shipping registries. This is more than 98 per cent of the world’s merchant fleet.

At the end of this guide you will find a list of all countries that are parties to the current convention and the dates of acceptance but does not indicate those who are implementing fully the 2010 amendments. Governments must submit reports on their compliance to the IMO by 1 January 2013.
2.3 Standards imposed by GWO

GWO standards and criteria adapt to reflect safety hazards in the wind turbine industry. The latest versions of all standards are available on GWO site. The content of each program is reviewed and updated to ensure a safe work environment for anyone working in the wind turbine industry.

Wind energy employers often carry out training that is generic, such as first aid or working at height. GWO members have standardized this training, achieving a wide range of measurable benefits.

GWO members create training standards reflecting the risks their technicians face at work.

Training providers, certified according to GWO criteria, deliver the training.

Employers accept the training of GWO-certified technicians, wherever they were trained.

2.4 The CompEx Scheme

The CompEx Scheme is the recognised global scheme for the protection of oil, gas and chemical workers in both offshore and onshore activities. The scheme assesses the competency of employees and contract staff who are working in environments with the potential risk of explosive atmospheres.

CompEx is the only Certification Body that offers UKAS accredited certification for personnel who work in explosive atmospheres. This certification validates the core competency of practitioners working in explosive atmospheres. It also offers complete reassurance to employers managing the safety of these potentially hazardous workplaces and can provide the added benefit by assisting employers reduce their insurance costs.

Since its inception, CompEx has certificated over 64,000 candidates in the Gas & Vapour modules and thousands more in the Dust, Fuel, Water, Mechanical modules and more recently in the Application Design Engineer and Responsible Persons Modules. This has had a direct impact on improved safety in the workplace and a dramatic reduction in injuries caused by dust clouds and explosive blasts.

3 COURSES DEVELOPED USING THE STANDARDS

Based on the standards listed above were developed a number of courses, whose completion is mandatory for all persons wishing to access jobs in these sectors of industry.

It also must be said that instructors who run these programs should in turn have graduated these programs. They have a highly qualified and a very high experience in their sector of industry.

All courses must be validated from the industry organization that represents the industry standard in question. Examples of some courses on four industrial sectors are presented in Table 1.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Standard</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offshore</td>
<td>OPITO</td>
<td>Basic Offshore Safety Induction &amp; Emergency Training (BOSIET) with Emergency Breathing System (EBS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic H2S Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Compressed Air Emergency Breathing System (CA-EBS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Initial Deployment Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Escape Chute Training - Initial Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Helideck Emergency Response Team Leader (HERTL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further Training Standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control Room Operator Emergency Response Standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ERRV Crew Advanced Medical Aid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lifting Roles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gas Testing and Performing Authority Roles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safety Representatives</td>
</tr>
</tbody>
</table>
### COURSES DEVELOPED IN CERONAV

Our institution has always been concerned to meet the standards imposed by the organizations recognized worldwide and implemented a series of courses absolutely necessary staff that will work in their respective industries.

At present we have implemented programs required of maritime industry and some of the programs required by the offshore industry.

A list of the most important courses accredited in our organization recognized by the industry standards are listed below:

**Standard OPITO;**
- Further Onshore Emergency Response;
- Helicopter Underwater Escape Training (with Emergency Breathing System);
- Basic Offshore Safety Induction & Emergency Training (BOSIET) with Emergency Breathing System (EBS);
- Basic H₂S Training;
- Escape Chute Training - Initial Training;

**Standard STCW – Mandatory courses for maritime personnel**
- Radar navigation, radar plotting and use of ARPA radar;
- General operator's certificate for GMDSS (GMDSS - GOC);
- Restricted operator's certificate for GMDSS (GMDSS-ROC);
- Transport and handling of dangerous, hazardous and harmful cargoes;
- Pollution prevention of the marine environment;
- Personal survival techniques;
- Proficiency in survival craft and rescue boats, other than fast rescue boats;
- Personal safety and social responsibilities on board the ship;
- Advanced fire fighting;
- Medical first aid;
Apart from these courses, at this moment CERONAV started accreditation procedures for courses under standard of GWO - Global Wind Organization and is considering taking in account accreditation of courses using other standards, like CompEx.

5 CONCLUSIONS

Using industry standards in preparing highly qualified staff allows for a job well paid and secure.

The industry standard is the highest stage of acquiring some technical skills.

Everyone, who has a target to have best professional experience, must full know all the requirements of an industry standard.

Requirements of industry standards will lead to a better quality of courses delivered by a provider. This enables categorization of training centres in the field.

REFERENCES


