EUExNet Summer News July 2011 Newsletter number 6

News in Short

1. The European EUExcert association

The European EUExcert Association is now formally registered in Sweden. Initially the EUExcert association represents a Network of National EUExcert nodes in Sweden, Norway, Estonia, The Czech Republic, Ireland, United Kingdom, Portugal, Germany and Italia Some new members are in process to join and new interested Nations are welcome to join. For further information please contact Erik.Nilsson@kcem.se or Hans.Wallin@kcem.se

2. The 2nd International Conference on Explosive Education and Certification of Skills will take place as planned in Lisbon September 21.

	Preliminary Program planning
9:00-9:30	Registration
9:30-9:45	Opening of the Conference
9:45-10:15	EUExNet – A EUROPEAN EXPLOSIVES NETWORK –*Erik Nilsson and Hans Wallin, KCEM, Sweden*
10:15-10:45	THE DIFFICULTIES IN SETTING TRAINING STANDARDS IN AN INDUSTRY WHERE NONE EXIST- *Alan Hatcher, ISSEE,* United Kingdom
11:45-11:15	Coffee-break
11:15-11:45	ASSESSING COMPETENCE IN THE WORKPLACE FOR EXPLOSIVES QUALIFICATIONS - *Denise Clarke, Homeland Security Qualifications, United Kingdom*
11:45-12:15	VARIOUS WAYS HOW COMPETENCE STANDARDS MAY BE USED TO IMPROVE MOBILITY IN EXPLOSIVE SECTOR - *Milos Ferjencik and Vojtech Pelikan, University of*

	Pardubice, Czech Republic
12:15-12:45	DISPLACEMENT EFFECT WORKS WITH EXPLOSIVES ON SURROUNDING AREA – *Constantin Ciocoiu and Constantin Lupu, Romania*
12:45-14:00	Lunch
14:00-14.30	THE FUTURE EUROPEAN SHOTFIRER, COMPETENCE LEVEL BASED ON A LDV PROJECT REQUIREMENTS – *Aslak Ravlo, NFF, Norway*
14:30-15:00	EXPLOSIVE EDUCATION AND LEGAL ASPECTS IN ESTONIA - *Ingo Valgma, Department of Mining TUT, Kaimar Eilo, Estonian Technical Surveillance Authority and Rein Voog, Estonian Association of Mining Enterprises, Estonia*
15:00-15:30	FIREWORKS REGULATIONS AND TRAINING IN PORTUGAL: PAST, PRESENT AND FUTURE - *A. M. Rodrigues, ANEPE, A. M. Fernandes. APIPE, Portugal*
15:30-16:00	Coffee-break
16:00-16:30	INTRODUCTION OF EXPLOSIVE SUBSTANCES AND ARTICLES (ESA) NATIONAL OCCUPATIONAL STANDARDS (NOS) VOCATION QUALIFICATION (VQ) ASSESSMENT IN QINETIQ - *Brian Wilson, QinetiQ, MoD, United Kingdom*
16:30-17:00	USE AND MISUSE OF EXPLOSIVES: A PORTUGUESE POLICE APPROACH – *Luís Ferreira, CIEXSS, PSP, Portugal*
17:00-17:30	A NEW TRAINING MANUAL AND STRATEGY FOR IMPROVING SHOTFIRE COMPETENCIES OF PROFESSIONALS WORKING IN THE FIELD OF EXPLOSIVES IN ROCK - *J. Góis, Univ. of Coimbra; A. Vieira, A. C. Galiza and H. I. Chaminé, Polytechnic of **Porto, Portugal***

For further information please contact Professor Jose Gois cmgois@sapo.pt or Hans Wallin hans.wallin@kcem.se

3. New Education for Explosives specialists started in Sweden

Success in Sweden for New Higher Vocational Education Courses, HVECs, for personnel in the Explosives sector which start in Karlskoga in August this year. 25 students will commence a 2 year long specialised education for professional handling of explosive material and explosive process. HVECs are a new provision of advanced vocational education tailored to the needs from the explosives sector. In HVECs a modern approach is taken where the theoretical learning is integrated and blended with vocational practice at the workplace. Further information please contact Ahmed.Khaled@karlskoga.se or Hans.Wallin@kcem.se

Article

4. Measuring competence in the UK through explosives vocational qualifications.

Article written by Denise Clarke, Homeland Security Qualifications for further information please contact: Denise.Clarke@homelandsecurityqualifications.co.uk

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Introduction

The Standards Setting Body for Explosives, Munitions and Search Occupations (SSB for EMSO) was formed in 2000 in order to develop National Occupational Standards[1] and National/Scottish Vocational Qualifications (N/SVQs) for those involved in munition clearance (ie bomb disposal – both EOD and IEDD) and search activities. The standards would provide specific, objective, measurable and nationally agreed statements of competence that could be used in any part of the explosives industry – military, civilian or private sector. These standards were launched in October 2003.

The Defence Ordnance Safety Group (DOSG) of the Ministry of Defence (MoD) then approached the SSB and asked for help in defining the competence of people who work with explosives. The outcome of this work later became known as the Explosive Substances and Articles (ESA) standards although some military stakeholders still refer to Weapons, Ordnance, Munitions and Explosives (WOME) standards. Since the MoD ideally wished its personnel to gain national accreditation for achievement of the resulting standards, the project was therefore widened to include all organizations that employed people who needed expertise in dealing with explosives. The work was developed by senior representatives of those organizations involved in ESA activities, in particular, the MoD, Army, Royal Navy, Royal Air Force, Dstl, QinetiQ, AWE, Leafield Engineering and MBDA.

ESA project outputs

A suite of around 450 standards were developed, of which around 260 are explosives-specific. The standards describe how people's performance would be measured (*performance criteria*), descriptions of

[1] Referred to here simply as “standards”

the parameters of competent performance (*contexts*) and the critical minimum knowledge and understanding (*knowledge requirements)* needed to fulfil the performance criteria and contexts. All these components are as outcomes.

35 qualifications designs were also developed - at levels UK 1 – 4 (ie they describe the competence of people working in basic support roles, as operators, supervisors/technicians and operational managers.

Drivers to implementing competence measures

Worldwide, the handling of explosives is usually regulated by law, with prescribed procedures, duties, responsibilities and obligations. Until recently, detailed competence statements in this safety critical area have not been defined. There is an increasing amount of interest in the UK in describing and measuring people's competence in all professions, including working with explosives.

Particular drivers include the fact that:

- competence measurement is increasingly the norm in most professions;
- legislation and regulation increasingly require employers to demonstrate a commitment to quality and effectiveness in their workforces;
- activities with significant, or indeed, perceived health and safety and public safety risks are subject to increasingly stringent monitoring and regulation;
- the risk of losses and litigation renders inaction financially and morally unacceptable;
- in the post-Cold War era, the pool of personnel with explosives competence is shrinking in many nations, which makes any way of providing measurable and transferable competence attractive
- an organization's ability to prove the competence of its workforce may confer a competitive advantage commercially and, in certain contexts, may be a pre-requisite for contractual or other reasons (eg if seeking to work collaboratively with national or multinational entities).

In July 2009, the MoD published a requirement for all people working with explosives to demonstrate competence against the National Occupational Standards (NOS) for Explosive Substances & Articles (ESA).

The Health and Safety Executive (HSE) has also stated that, when carrying out inspections or investigating incidents as the regulatory authority, it plans to review the competence of personnel against the ESA standards. We anticipate that proof of competence when working with

explosives will become increasingly important in the UK. This can be done by working to standards.

Standards lie at the heart of all HR processes. There are in fact many possible uses of standards in a range of HR processes as described by the diagram below.

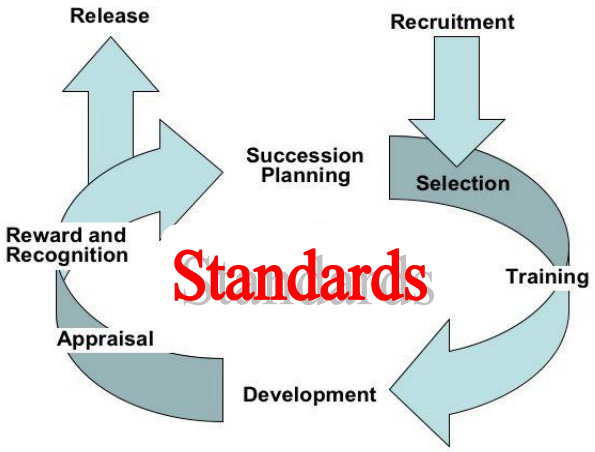

Diagram 1

By describing what an organization expects of its staff, standards can be used for many different purposes such as:

- recruitment and selection - eg job adverts, interview aide memoires, job descriptions, role profiles;
- appraisal – standards amplify an organization's expectations; appraisals can be more objective & evidence-based;
- training needs analysis – through self-assessment, development discussions, 360° feedback, Personal Development Plans, audits of team strengths & development needs;
- training syllabus design – based on the requirements of the standards;
- career management – eg career maps, career planning tools;
- succession planning – systematic approaches to talent management based on an organization's analysis of development needs;
- demonstration of a commitment to known quality standards, investment in people and the ability to comply with legislation, regulation and codes of practice;
- business continuity planning - systematic approaches to talent management development based on an organization's analysis of contingency mitigation;

… and many more specific applications within each part of the HR cycle.

HSQ's explosives vocational qualifications

HSQ has been recognized by the UK explosives sector as the UK explosives industry awarding body of choice as represented by the SSB for EMSO. It offers 3 different types of vocational qualification (VQ):

- VQs that are compliant with the new QCF (see below);
- VQs based on the existing nationally accredited ESA NOS;
- bespoke qualifications – which are probably recognized by most as externally recognized company training.

The next sections provide more detail about these qualifications.

Qualifications and Credit Framework (QCF) qualifications

The UK national qualifications framework has been undergoing redevelopment over the last few years and HSQ has kept up to date with these changes by redeveloping the ESA NOS into a format that is compliant with the new system - the Qualifications and Credit Framework (QCF). These will be coming on stream over the coming year.

Through our partnering arrangement with the Institute of Commercial Management (www.icm.ac.uk) – a global professional and accreditation body that has been established for some 30 years - we are able to offer UK nationally accredited qualifications. This means that we should soon be able to offer nationally accredited qualifications in explosives- and search-related disciplines which will also be endorsed by the Institute of Explosives Engineers.

We have already developed two new nationally accredited qualifications for two different communities which are now available:

- those who transport explosives but who are not required to hold an *Agreement on Dangerous Goods by Road* (ADR) licence;
- those who manage the safety of defence ranges (this work is therefore applicable to managing safety on defence training ranges and trials, evaluation, research and proofing ranges).

The components of QCF qualifications are known as *units of assessment.* The units can accredit knowledge, competence or a combination of both. They are written as learning outcomes and assessment criteria – ie their format is completely different from the current system of ESA NOS. However, early feedback suggests that users find the new format easier to work with. The units each have a level which is constant and they bear credit values which are based on learning time (1 credit = 10 hours learning time).

The units are all entered onto a national database which you can find at: www.accreditedqualifications.org.uk. The units must be accompanied by Rules of Combination (RoC) which specify how credit from the units achieved may count towards a qualification. Qualifications are described

by their size – Award (1 – 12 Credits); Certificates (13 – 36 Credits) and Diplomas (37 credits +). There are 9 levels within the QCF. Thus, there can be an Award, Certificate and Diploma at any or all levels from Entry level to level 8. For full details of how all UK qualifications fit together, please see http://www.ofqual.gov.uk/2368.aspx. For a quick reference of the different levels within the QCF and its relationship to other UK frameworks and the European Qualifications Framework (EQF), see diagram 2 below.

EQF	QCF	CQFW	SCQF	EHEA (Bologna)
8	8	8	12	3rd Cycle
7	7	7	11	2nd Cycle
6	6	6	10/9	1st Cycle
5	5/4	5/4	8/7	Short Cycle
4	3	3	6	
3	2	2	5	
2	1	1	4	
1	E3	E3	3	
	E2	E2	2	
	E1	E1	1	

Diagram 2

Key
EQF: European Qualifications Framework
QCF: Qualifications Credit Framework
CQFW: Credit and Qualifications Framework for Wales
SCQF: Scottish Credit and Qualifications Framework
EHEA: European Higher Education Area

Explosives Substances and Articles Vocational Qualifications (ESA VQs)

The ESA VQs comprise a number of NOS and are written in terms of the competence needed for a particular function which is measured by achieving the performance criteria; specifications of the critical minimum knowledge and understanding needed to fulfil the performance criteria and descriptions of the parameters of competent performance – the "contexts".

Bespoke qualifications

Unlike NVQs and QCF qualifications, bespoke qualifications are not part of a national framework and cannot be used to secure public funding or exemption from, say, college entrance requirements. However, for some employers and groups of employers, such awards are a useful tool for the selection, training and advancement of personnel and, where employers are in a collaborative community, may have credibility amongst them all, providing transferable skills records.

Bespoke qualifications may be linked to NOS or national qualifications and are likely to recognize approved in-house training, role profile matching or other records of experience, skills and knowledge in employment.

Assessment requirements

All of HSQ's qualifications involve an occupationally competent, qualified assessor to assess the candidate and require internal and external verification of assessment processes in order to assure the quality of assessment. VQ evidence must be current, valid, complete, authentic, sufficient and reliable, and is obtained by:

- direct observation of the candidate at work;
- scrutiny of the candidate's work products;
- questioning the candidate to assess underpinning knowledge and understanding and/or to authenticate the validity of other evidence;
- photographic, audio, video or other electronic recording of candidate activity;
- witness testimony from managers, colleagues or customers;
- previously recorded learning and achievement.

The candidates' evidence will be collated and cross-referenced to the standards in his or her portfolio, and, if acceptable, will be approved by a qualified and occupationally competent assessor and sampled for quality by a qualified and occupationally competent internal verifier. Portfolios will also be sampled for quality by a qualified and occupationally competent external verifier from the awarding body (ie HSQ).

Latest developments at HSQ

Over the last year, we have approved QinetiQ, the Royal Marines Commando Training Centre and SPEX Speciality Explosives Services to deliver HSQ's competence-based qualifications. Between them, they are delivering nationally accredited QCF qualifications, ESA VQs and bespoke qualifications.

We have recently received requests for our services from organizations in Belgium and Australia.

Summary

In summary, there are many significant benefits to measuring people against objective and detailed descriptions of competence. The use of standards and the achievement of explosives qualifications not only provides proof of competence but, if embedded in HR systems, provides organizations with systematic processes for capacity-building (both knowledge and competence) and the better targeting of resources, quality enhancement, risk avoidance, collaborative working and gaining a competitive edge.

HSQ has started delivering explosives-related vocational qualifications in the UK and we have started to expand the range of our offering and our client base, both at home and abroad.

We have already seen the cross-industry recognition of common roles and the UK explosives industry has recognized Homeland Security Qualifications so that people moving between employers will be recognized as competent if they have achieved an explosives qualification from HSQ. Whether we like it or not, UK regulators are taking an increasing interest in the explosives area to the point of insisting on proof that organizational policies meet competence requirements in the best interest of employees, public health and safety, environmental protection, economic growth and the taxpayer and we expect this trend to develop worldwide.

Denise Clarke 2 June 2011

With best Summer Regards from Erik Nilsson and Hans Wallin

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