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Proud partner

**EU
Exc@rt**

*Certifying Expertise in
European Explosives Sector*

www.euexcrt.org

Pilot project EU-Excrt: AGREEMENT n°2006 [- SE/06/B/F/PP/16 1036]

**Interim Report
at 2007-09-30**

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Introduction

The aim of this report is to present the achievements in the first 12 months of *EU-Excert* project (1st October 2006 – 30th September 2007).

By the analysis of the results it is possible to acquire useful elements for the future development of the project itself and to set path and priorities for the following “phase”.

This report is structured in 3 chapters:

- 1) Introduction
- 2) Work Packages
 - a. DISSEMINATION
 - b. SUMMARY ON EDUCATION & LEGISLATION IN THE EXPLOSIVE SECTOR
 - c. GLOSSARY
- 3) Conclusions

In the following, achievements are given together with references to the documentation developed, which are attached at the end of the interim report.

Work Packages

1) DISSEMINATION

Most of Nitrex' activities focused on this WORK PACKAGE, listed in the following:

1a) Translation of *EU-Excert* newsletters

Attached EUExcert newsletter translated in Italian

- *February (att.1)*
- *March (att.2)*
- *News n°3 (att.3)*

1b) Nitrex website (www.nitrex.it/eu-excert)

Nitrex renovated its website. On this occasion also the space granted to EUExcert project was improved and widened.

In EUExcert area can be found references to *EU-Excert I* and to *EU-Excert II*, the list of national reference Group, EUExcert website and infos. In addition, all Nitrex' educational activities are inserted under EUExcert "flag".

The new Nitrex' web site intend to be a national and hopefully international (we are translating it into Portuguese) reference for the people working in the explosive sector, for this reason we added information on legislation, use of explosives, safety data sheets and we tried to involve also public institution (*Enti territoriali*). Six hundred people applied to Nitrex' newsletter and more than 14.000 contacts are counted.

Attached: copies of Nitrex web site (att.4)

1c) Articles published in technical magazines

Nitrex spread information about the project through the technical magazine "Costruzioni" (circulation 20.000 copies).

Four articles were published giving an overview of the project in particular:

- 1) *The approval of the EUExcert II and the new partners (att.5)*
- 2) *Symposium 2007, organized by EU-Excert in June in Great Britain (att.6)*
- 3) *Educational Qualification Framework (att.7)*
- 4) *Third Project Meeting of EUExcert and Europe Symposium of Explosives Sector (att.8)*

1d) Mailing & seminars

mailing

Information of the project was given to the National Reference Group and to other National stakeholders through letters (400 leaflets about Euexcert Symposium were posted to the Ministry of Internal Affairs, Politecnico of Torino, national Stakeholders) and e-mails.

Last Euexcert newsletter, reporting the papers presented to Euexcert Symposium, was sent, once translated in Italian, to 600 people through Nitrex' website.

seminars

Nitrex will participate as guest, presenting papers on blast vibration monitoring, to two seminars organized by the regional authorities responsible for mines (Trento and Bergamo). This activities will be presented under Euexcert' *flag* .

2) SUMMARY ON EDUCATION & LEGISLATION IN THE EXPLOSIVE SECTOR

2.A EDUCATION

A brief overview of the Italian educational system in the explosive sector is given, dividing the courses in three different categories:

2.1 a) Nationally recognized courses

Among the technical Universities the only ones who deliver courses on the use of explosives are in Torino, Bologna, Pisa, Siena, Roma, Cagliari.

The University where the topic is most developed is in the Politecnico di Torino:

Bachelor degree in environmental Engineering

One of the core course is on "analysis and drilling techniques". Some of the main topics are the following:

- ✓ Rock blasting in open air, quarries & underwater
- ✓ Drilling system
- ✓ Type of explosives
- ✓ Geophysical analysis

PhD in demolition science

The main topics are:

- ✓ Different types of demolition systems
- ✓ Different types of falling
- ✓ Seismic control

2b) Non recognized courses

The highest number of courses regular courses are delivered by driving schools and consultants on ADR legislation and requirements.

Other courses/seminars on explosives that are given occasionally are mainly intended for people willing to get the blaster license.

This is due to the fact that blasters are the only operator in the explosives sectors who are required to pass an exam to work.

Some of the occasional courses are organized by:

ANIM (national association of mining engineers), who organized a course in 2001, 2004 and 2007.

CSAO (Centro Sicurezza Applicata all'Organizzazione – educational centre for Security), which, this year, is organizing the sixth edition of the course for blasters (20 hours of theoretical lessons, but no practice is foreseen).

The vast majority of these courses are arranged by local authorities responsible for explosives, such as regions and provinces. Due to the fact that this is a niche sector, no standards on competencies and qualification is set (the requirement for this exam dated back to a 1955 law and they were not update since then) and that the action for the authorities is no coordinated the effectiveness of this courses is very low (restrict budgeted, few teachers, no didactical material, no practical experience, ecc.).

For what it concern the other fields of the explosive sector (chemistry, handling, stock, demilitarization ecc) it is much more difficult to find companies interest in delivering courses, since there is no legal requirement or license and a very low request.

Nitrex would like to fill, at list partially, this lack both through the web site that providing educational material and courses.

Up to the moment courses were delivered on the following subject: blast vibration monitoring, system of ignition, legal aspect and transport problems.

(att. Table of contents, att.9)

Moreover, since 2005 education in the explosives sector has become more difficult, since the Ministry of International Affairs, responsible for explosives matters, required the educational providers to have a license to impart education or to send to the local representatives the details of the participants, teachers and contents of each course.

2c) In-house training

The direct consequence is that the majority of the education on explosives is in-house training.

Analyzing the data coming from three companies, it can be said that:

- no academic courses are provided for new comes on explosives matters (often the fact that to handle explosives you have to pass an exam is considered enough)
- newcomers are given written instruction, much as safety data sheets and data product, and they are “sided” by holder workers. After 15 days, especially for blasters, the chef of the department will control the achievement of the operator.

Annually it is foreseen a short “updating” course.

2.B LEGISLATION

Only in the **mining and pyrotechnic fields a “licence” is foreseen by law**, where the level of knowledge required is related only to priming and charging, nothing to do with the controlled use of explosives to minimize the impact in the surrounding.

This is called “**Licenza per il mestiere di fochino**” (blaster license).

This licence is given after an examination at the local Police station, taken on the basis of the **art. 27 of the Decree of the [Italian] President of the Republic, April 27, 1955, nr. 547**

which, with no upgrade since 1955, establish that:

The operations of

- *dynamite de-freezing*
- *assembly and priming of the charges and charging the hole*
- *firing the charges, both with safety fuse and electric*
- *unexploded charges clearance*

has to be performed only by personnel with a special license issued, after the examination of the "Explosive Provincial Technical Committee" (1 officer of the Army or Navy or Air forces, the Chief of the local Fire department, 1 engineer of the technical office of the Ministry of the finance or of the Ministry of public work or of the Bureau of Mines with competencies in explosives and of 1 officer of the Police, plus 2 inspector of the Ministry of the work one of them is an engineer and the other one a doctor).

The license is issued after having proofed:

- *physical efficiency*
- *intellectual capabilities and general knowledge*
- *proper knowledge of the job*
- *knowledge of the safety norms and of the legislation for the use of explosive in the mining field.*

The only reference to competence and knowledge dated back to a **1931 law**, still valid.

However even if it is mention the fact that people must demonstrate their skill in order to work with explosives, there is no mention of what are the abilities required and who must verify them.

Other references to competences can be found in the following laws:

**R.D. 18 giugno 1931, n. 773 T.U.L.P.S. - Testo unico delle leggi di pubblica sicurezza
"Approvazione del testo unico delle leggi di pubblica sicurezza"**

**ROYAL DECREE, 18th JUNE 1931, n. 773 - TULPS – UNIQUE TEXT ON LEGISLATION
CONCERNING PUBLIC SECURITY**

ARTICOLO 48 (art. 47 T.U. 1926)

Chi fabbrica o accende fuochi artificiali deve dimostrare la sua capacità tecnica.

Whoever produces or lights artificial fire must demonstrate his technical ability.

DECRETO LEGISLATIVO 19 SETTEMBRE 1994, N. 626

Attuazione delle direttive 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE 93/88/CEE, 95/63/CE, 97/42, 98/24, 99/38 e 2001/45/CE riguardanti il miglioramento della sicurezza e salute dei lavoratori sul luogo di lavoro.(titolo così modificato dall'articolo 2, d. lgs. n. 235 del 2003)

LEGISLATIVE DECREE 19 SEPTEMBER 1994, N.626

Application of the European directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE 93/88/CEE, 95/63/CE, 97/42, 98/24, 99/38 and 2001/45/CE concerning the improvement of the safety – security and healthiness of employees in the workplace

Capo VI - Informazione e formazione dei lavoratori

Capo VI - Information and training of employees

Art. 21. Informazione dei lavoratori.

Art. 21. Information to employees

1. Il datore di lavoro provvede affinché, ciascun lavoratore riceva un'adeguata informazione su:

- a) i rischi per la sicurezza e la salute connessi all'attività dell'impresa in generale;
- b) le misure e le attività di protezione e prevenzione adottate;
- c) i rischi specifici cui è esposto in relazione all'attività svolta, le normative di sicurezza e le disposizioni aziendali in materia;
- d) i pericoli connessi all'uso delle sostanze e dei preparati pericolosi sulla base delle schede dei dati di sicurezza previste dalla normativa vigente e dalle norme di buona tecnica;
- e) le procedure che riguardano il pronto soccorso, la lotta antincendio, l'evacuazione dei lavoratori;
- f) il responsabile del servizio di prevenzione e protezione ed il medico competente;
- g) i nominativi dei lavoratori incaricati di applicare le misure di cui agli [articoli 12 e 15](#).

1. *The employers have to guarantee that every employee receives adequate information concerning:*

- a) *Risk for security and health connected in general with the activity of the industry;*
- b) *Measures and protection an prevention systems adopted;*
- c) *Specific risk link to the activity developed , legislation on security and company policy on the subject*
- d) *Dangers connected to the use of dangerous substances*
- e) *Procedure concerning first aid, fire prevention, emergency exit of employers*
- f) *Responsible for the prevention and protection service and the doctor*
- g) *...*

Art. 22. Formazione dei lavoratori.

Art. 22. Training of employees

1. Il datore di lavoro assicura che ciascun lavoratore, ivi compresi i lavoratori di cui all'articolo 1, comma 3, riceva una formazione sufficiente ed adeguata in materia di sicurezza e di salute, con particolare riferimento al proprio posto di lavoro ed alle proprie mansioni.

2. La formazione deve avvenire in occasione:

- a) dell'assunzione;
- b) del trasferimento o cambiamento di mansioni;
- c) dell'introduzione di nuove attrezzature di lavoro o di nuove tecnologie, di nuove sostanze e preparati pericolosi.

3. La formazione deve essere periodicamente ripetuta in relazione all'evoluzione dei rischi ovvero all'insorgenza di nuovi rischi.

1. *The employer assure that each worker (...) gets an adequate and sufficient level of training in safety and security, with focused attention to his own workplace and his mansions.*

2. *Training should be done on the occasion of:*

- a) *Employment*
- b) *Displacement - new activity*
- c) *Introduction of new instrument of work and technologies, new substances and dangerous products*

3. *Training must be repeated periodically in relation to the risk or at the development of new risks.*

3) GLOSSARY

In order to develop the activities required Nitrex:

- Required information to the National Reference Group
- Translated the terminology for all letters and in particular for the A letter also the definitions
- Addition of new words
- Integration and improvement of English definitions

Conclusion

Ideas to be developed in the next phase:

1) Educational video on demolition

Contact were taken with a company (att.10 offer) to create a dedicated video on demolition with explosive, whose index will be:

- Survey
- Prospection
- Analysis
- Quality control
- Safety planning
- Drilling
- Loading
- Blasting
- Monitoring

The final index of the video will be send to all partners in order to receive advices or suggestion or to create a product usable all over Europe

2) Publication of two books:

- a) Chemistry of explosives with the collaboration of an technical operator working in a demilitarization company
- b) Collection of laws and regulations of quarries.