

Track and Tracing

The implementation of the EU Directive on Track and Trace of Explosives has got underway. Since 1.5 years all explosives covered by the Directive must be uniquely labelled by the manufacturers or importers. These labels must be attached to the respective objects in a human as well as machine-readable form. As a second stage of implementation, all companies handling explosives must register and record the labelled information. This applies especially to those selling and using explosives i.e. the blasting companies. The deadline for implementing this part of the Directive is 5th April 2015. If blasting companies have not yet taken any measures towards implementing the Directive, it is now high time to tackle this task. The experiences made so far have shown that implementing all requirements made by the Directive forms quite a complex task and requires sufficient time, personnel and financial resources.

Reviewing the first Steps

The leading explosives manufacturers organised in the FEEM took three years of lead time to fulfil their new marking duty on time of the commencement of the EU regulation. In 2010 the complete industry organized itself in task forces and committees who agreed upon the two-dimensional data matrix codes ECC 200 as a FEEM standard. Also TTE-Europe GmbH contributed to that. The industry-neutral company targeted a custom-tailored solution of the track & trace issue in the blasting sector. Since 2012 the TTE software is deployed as internal solution of explosives manufacturers in and beyond Germany. One of the first difficulties that the company had to solve in collaboration with the future users was: the speed and thus the profitability of production were not allowed to shrink due to the application of the new labels. After finding a satisfying answer to the physical labelling, the digital data were given attention. They were supposed to be administrated quickly and easily and later also be transferred in the framework of the second level of the EU directive. Therefore the system was constructed in a way that entire packaging hierarchies can be saved. The information of single items is summarized in small packaging units and these are assigned to a higher packaging unit. For example: all tracking numbers of single detonators are listed in the data for the single outer packaging, which again is part of an entire pallet.

Sample label referring to EU-directive:



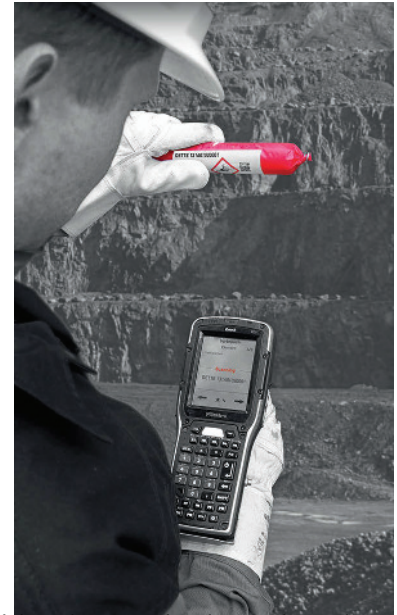
[\[BACK TO TOP\]](#)

NEWSLETTER December 2014

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The German blasting association made an analysis for the implementation of the EU-identification directive in 2013. Almost half of all codes, which were produced by the manufacturers, were problematic. 20 to 30 percent of markings didn't accord to the data matrix codes required by the FEEM. Furthermore the coded data was partly erroneous: They were partial incomplete or incorrect. In total only 20 to 25 percent of the tested labels were without errors. This alarmingly result made an impact. Until summer 2014 a lot manufacturers repaired the errors. But unfortunately some non-standard explosives still exist. Main goal of the manufacturers is to remedy defects until the end of this year – just in time to implement the second part of the EU-directive with due date April 2015. Therefore it is important for every party to set up with new hard and software. The ambition of the TTE solution was and is to make the directive achievable for every user with the least possible effort. Regarding this TTE offers besides the required Track and Trace functionalities an electronically stock book to avoid the so far necessary manual paper work. Due to the time saving effect in administration of the stock book, even a practical benefit can be raised from the EU-Directive.



Next steps from 201

When the EU-directive comes into force for distributors and users of explosives at the 5th of April 2015, they are not only obligated to data collection. Every single item, which shall be used for civil purpose has to be completely traceable over the whole supply chain until its manufacturer, distributor or importer. The data of every single element has to be recorded in time. Afterwards the data has to be stored for minimum of 10 years, protected from any falsification. A special challenge will be the availability of information about origin, position and disposition of the explosives for the responsible authority. Every company has to name a responsible contact person, which is available for the controller at every daytime and every day of a week to give information in a short time period. TTE also regarded this aspect to facilitate the permanent obligation to disclosure.

With the TTE software it only takes one unique temporary access for the authority to check a single tracking number. This access can be closed by the TTE customer at any time. The controller receives herewith no insight in the whole stock book, but the data of the wanted tracking number. Furthermore the online version takes all worries from the user about the safe and long lasting storing of data, due to capture them in a secure data center in Europe. With the login details, the user can access to the program from every computer with internet. This means, in case a computer fail, the access to the software is not disturbed. Alternatively the software can also be installed locally on a computer in the company s intranet. But this solution requires from its user a continuous independent maintenance. TTE can also help here to fulfill the requirements of the EU to repeated testing of the data tracking system.

[\[BACK TO TOP\]](#)

NEWSLETTER December 2014

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Another problem when it comes to introducing the obligation of tracking explosives for end users and traders is that the mentioned XML files have until now not been transmitted coherently across manufacturers. There is no binding consensus in the industry yet on how they are supposed to get from manufacturer to the rest of the supply chain. Most of the transmission forms cause manual efforts to different extents. There are e. g. USB sticks accompanying the delivery. This process causes considerable manual efforts and entails besides other security risks the danger of transmitting viruses to the computer. More security of loss and the access of unauthorized persons is offered by electronic transmissions. The TTE software supports all ways of transmission and is also compatible to track & trace systems of other providers.

To what extent this applies to the solutions of other providers is currently not sure. To enable the simple and secure data transmission across Europe with all suppliers and customers, the TTE-Trustcenter is available as European standard. The TTE-Trustcenter transfers all data into one single system. It is a fully automatic solution that already many big and renowned manufacturers are using. The universal data exchange platform is Europe-wide available and can be used by everyone, as it works independent from producers. The fed in XML files are automatically audited on correspondence to the standard. This way TTE-Trustcenter protects its users from problems in data processing and transmission. Regardless of whether the companies apply TTE products internally, more and more customers decide to profit from the TTE-Trustcenter's stated advantages.

Consider support services

The support before and after purchasing an appropriate solution should equally be taken into account. Especially global acting manufacturers of explosives, but also for bigger internationally present end users of explosives a Europe wide availability of support in the respective language is important. TTE is with its partners available in all countries of the EU as well as in Norway and Switzerland. A wide European partner network enables TTE to provide support in the respective local language and directly in the near area to the customer. This way TTE can offer special service contracts, which guarantee the best possible maintenance and support.



[\[BACK TO TOP\]](#)

The TTE partners work closely together with responsible authorities and associations. Especially the successful cooperation of TTE-Europe GmbH with the German Blasting Association when developing the software was of great utility. This collaboration will be strengthened and extended more in the future. Particularly the national blasting associations can best identify how the regulations and conditions for explosives affect the companies in the respective country.

In this way the TTE software can be further optimized and customized to country specific regulations

*Jörg Rennert, Member of the Board
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New regulations for coloured marking

We would also like to point your attention to another topic currently being discussed on a European level. The European Commission has published the results of a study on color-coding of explosives in June 2014. Between October 2011 and October 2013 a suggestion for standardizing color-coding of explosives used in the EU was worked out as a project financed by the European Commission. The project's full title is:

RECOMMENDATIONS TOWARD SETTING STANDARDS AND REGULATING THE COLOR-CODING OF EXPLOSIVES AND BLASTING ACCESSORIES

It was worked out by the following institutes:

AID – Stabilimento Rispristini e Recupero del Munizionamento

I.R.E. – Istituto Ricerche Esplosivistiche

ECA Italia – European Consulting Agency Srl

The project was partly based on the following program initiated by the European Commission:

Prevention of and Fight against Crime Program of the European Union – European Commission – Directorate – General Home Affairs

According to the authors of the project, the goal was to contribute to improving the safety when handling explosives and to contribute to fighting the misuse of explosives.

[\[BACK TO TOP\]](#)

NEWSLETTER December 2014

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