



**Project Ref.: RO01-KA202-024450**

**RMWF Project: Implementation of International Guidelines  
for Risk Management in Welding Fabrication**

# **Industry Report**

**English Version**

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# RESULTS FROM A SURVEY IN THE RMWF PROJECT

## A project report

### Summary

The project “Risk Management in Welding Fabrication (RMWF)” is an ERASMUS + project which have been kicked off in November 2016.

The project's objective is to develop a new training course and to train the first groups of specialists in the field of risk management in welding fabrication. Structural economic changes and industrial productivity growth require a highly skilled and adaptable workforce in order to face the European economic and social challenges for the early future. The project gains relevance because it will assure that the skills and qualification profile development are done at European level, aligned with the European market needs.

As a part of the ongoing project work a questionnaire was developed in order to study the market needs, status and requirements for education and training.

This paper focus on this survey and its findings and at the same time tries to create some conclusions based on these findings.

### Background

The RMWF project is lead by ISIM in Timisoara, Romania with participants from Portugal, Hungary and Norway. These countries span a wide variety of companies with a broad span of experience, qualification requirements and international profile when it comes to quality level. Their business areas, or industrial types and their background should indicate that the requirement for risk based systems, management as well as education and training should be obvious.

The target group of the proposal is composed of welding personnel already qualified in basic welding, having already an IEW/EWE IWT/EWT diploma. That means the target group is welding engineers preferably with industrial background and experience. We may assume that this target group will take the proposed education and training as an activity in addition to the job, that they will be part time students, in other words on the job training as a part of a life-long education. Such education may create limitations for the students.

The questionnaire focused on company details, type of industry and industry specific questions related to implemented standards. It also asked a number of questions related to risk based management and the status of the companies in this respect. At the end some questions were raised regarding educational preferences.

The main aim of the survey will be the identification of industry requests for personnel qualified in risk management in welding fabrication. Basically this means the identification of the number of potential persons in the target group (i.e. welding personnel already qualified in basic welding, having an IEW/EWE, IWT/EWT or IWI-C certificate). By contacting the industrial stakeholders in welding

fabrication (i.e. companies in metal construction, automotive industry, railway industry and their sub-contractors), another aim that will be fulfilled, which is raising the awareness regarding the importance of risk management in welding fabrication. Furthermore, a third aim will be fulfilled simultaneously, which is informing the industry about the project and basically realizing a first announcement for participation to the pilot-courses, in case of the Hungarian and Romanian partners. In case of the other partners the distribution for the harmonized questionnaire will also be useful, since it will help the project partners to correctly assess the current interest in such courses in their own countries and to decide upon the organization of such training courses.

## The survey

The survey was developed through cooperation between all partners and submitted to the industry in the participating countries. The survey consisted mainly of questions which could be ticked off, but also with textual input from the respondents.

All questionnaires were translated and submitted in the native language

The questionnaire form will be created in English by the work package leader after careful analysis of its contents and after consulting with all the other project partners regarding the questions to be asked in the questionnaire. The analysis will refer to the size of the manufacturers, number of employees in the welding department etc. After the questionnaire is finalized and agreed by all partners, it will be distributed to the partners and each of them will translate it into their national language. The information, regarding quality management and risk management in welding fabrication used mainly in the countries of the project partners, will be collected and organized by the partners using national sources such as chambers of commerce and industry, public authorities, European surveys (Eurostat), industrial partners and partners own experience. The information will be selected and analyzed, in order to give the consortium the necessary inputs to prepare the content of training guidelines and to assess the need for such a course. The final, statistically processed overall report will be written by the work package leader (Quality Management Software) in English and it will be translated into the national language of each partner.

The results from the survey were submitted to Quality Management Software for processing and statistical analyzes. We must admit that the questionnaire was developed from a proposed questionnaire developed by Quality management Software and further extended by the different participant based on their experience and interest.

We must today admit that none of the participants actually have a broad experience of developing international questionnaires and that was reflected in the final result.

It was decided that the questionnaire should be translated into local languages, which is quite natural in order to obtain positive feedback from local industries. However when we introduced questions that had to be answered in writing then we at the same time had introduced possible interpretation errors due to translations of the answers. It also became obvious that free text answers were dependent on the clients interpretation of the question, who might get some of its original meaning lost in the translation process from the original English text.



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## The results

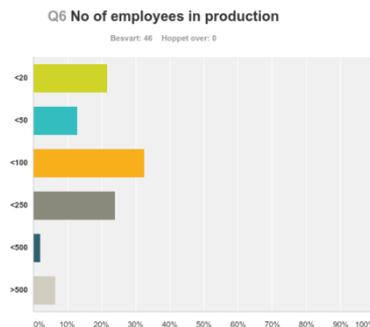
A total number of 46 companies had answered the survey. If we look at the number of companies in the welding field in the participating countries, then the number of answers is extremely low. Then the first question we have to raise is:

- Why is the response rate so extremely low?
- Was the questionnaire too complicated?
- Was the requirement for response time too short?
- Were the questions irrelevant?
- Or-was the topic irrelevant and did not catch any interest?

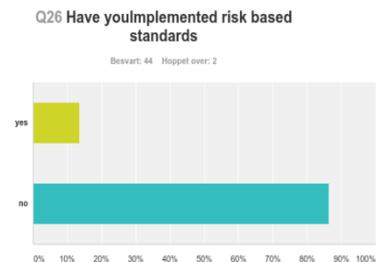
One astonishing element here is that even from the off-shore oriented Norwegian industry there was little interest at all. And this should be an industry that really focused on risk management.

When analyzing the individual responses we observed that some of the response patterns were not logical at all. It seems that some of the respondents just ticked off in order to be polite and answer the questionnaire.

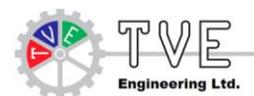
However if we look at the size of companies that responded, it might also give an idea of why the response was as it is. From the figure we can see that the companies that answered is mostly in the SMB segment. We may assume that a larger percentage in this market segment do not have risk management as a major topic compared with larger companies. In average the turnover of these companies was also low, which means that the added value which they generated can be expected as low as well.



As we can see from the question: “*Has you implemented any risk based standards?*” The overwhelming answer is No. This might indicate that risk based topics are not having any priority among the respondents.



BUT - the following question: “*Have you planned to implement risk based standards?*”,



gave us a surprise. This means that most of the respondents do not feel that risk based management in welding fabrication is an important topic.

Again this can reflect the respondents company size.- or--- it can indicate that the respondents are not fully aware of what we mean by risk based management in welding fabrication, and it may indicate that the topic and content of the topic and the consequences of it: risk based management, actually is not fully understood. This has to be investigated further.

The last part of the survey focused on learning environment and learning alternatives.

We asked: “*What type of learning do you prefer ?*”, but-- we did not specify what we meant by the different expressions. This is of course something that can really be a problem if we dig deeper into the different topics. What do we actually understand by: e-learning, work based learning and so forth?

However one important answer in this respect is the following. We see that most of the respondents will carry out their education in combination with their job. This means it will be a part of a life-long learning experience.

For the training providers this will be a very important statement from the responding persons. And.... Most of the responders want to carry out education and training in this field

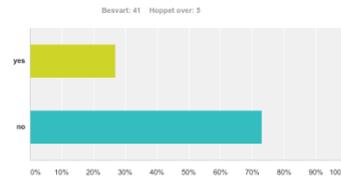
### Interpretation of the results

How shall we interpret the results?

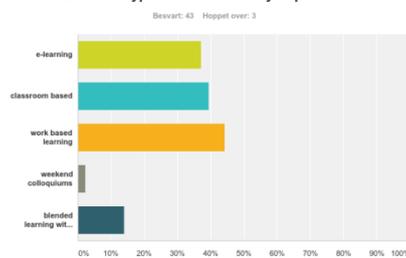
Since we have a limited number of respondents and very few numbers of really complete and good responses it is difficult to have any good conclusions. We can also see that some of the questions asked are of such a general nature that we ought to have implemented a set of definitions in conjunction with the questions.

From the answers we may assume that the respondents are either in the welding sector as welding engineers or welding managers since the direct welding related questions are answered in a satisfactory manner.

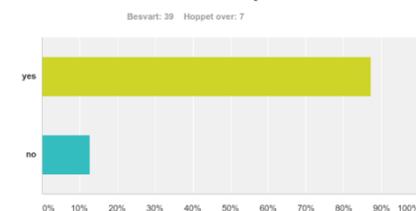
Q28 Have you planned to implement risk based standards ?



Q66 What type of education do you prefer ?



Q67 Will you carry out the education in combination with the job





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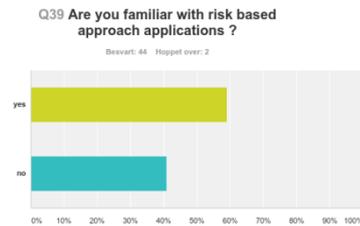
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Why so few companies have implemented risk based systems or management is maybe strange, but why so few want to implement such systems feels strange. One conclusion might be that the topic is not very well understood or that the information about that topic is limited. However most respondents claim that are familiar with risk based approach applications, but again—what means familiar ??



When it comes to education and training we can draw some conclusion it seems. The respondents will carry out the training as a part time study in addition to their existing jobs. Very few foresee that they can carry out such education on a full time basis. They also want to have short courses, maybe in short modules that allow them to build up the education in a structured manner.

## Conclusions

The result of the survey gave us few respondents and we would have preferred to have a much better data set in order to generate good conclusions.

Our interpretation of the result is as follows:

1. Risk Management in Welding Fabrication is still a *relatively unknown subject* and more information is needed in the market in order to fully understand it's potential.
2. If courses for this topic are developed, then that development must take into consideration that the students will be *part time students* having a full day's work in addition.
3. Any courses will be a part of a *life-long education* development within the welding sector. This will require carefully planning and development of such education.
4. It might be advisable to develop a *new survey*, based on the current one, but much more focused on key topics and elements. If so we can find the true state of Risk Management in Welding. Maybe this can be done at the end of the project when a suitable education path has been developed through this project and presented to the industry.
5. If we shall draw any firm conclusions from such survey, we *have to simplify the questionnaires* and not allow the respondents to answer in plain text in their native language. Then the interpretations will be avoided as well as translation mistakes.
6. However we also clearly can conclude that it is a *need for education and training related to Risk management in Welding Fabrication*. The respondents answer is that they want to carry out training as a part of a lifelong learning path, to combine the education with the job.
7. Based on the previous conclusion, in paragraph 6, then the current *EFWF Guideline and course support must be updated* to reflect the need in the industry *with short course* elements that enable the people to combine job and education in a flexible manner.