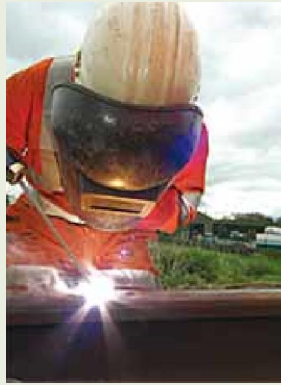


# RAILSAFE

## Education, Qualification and Certification



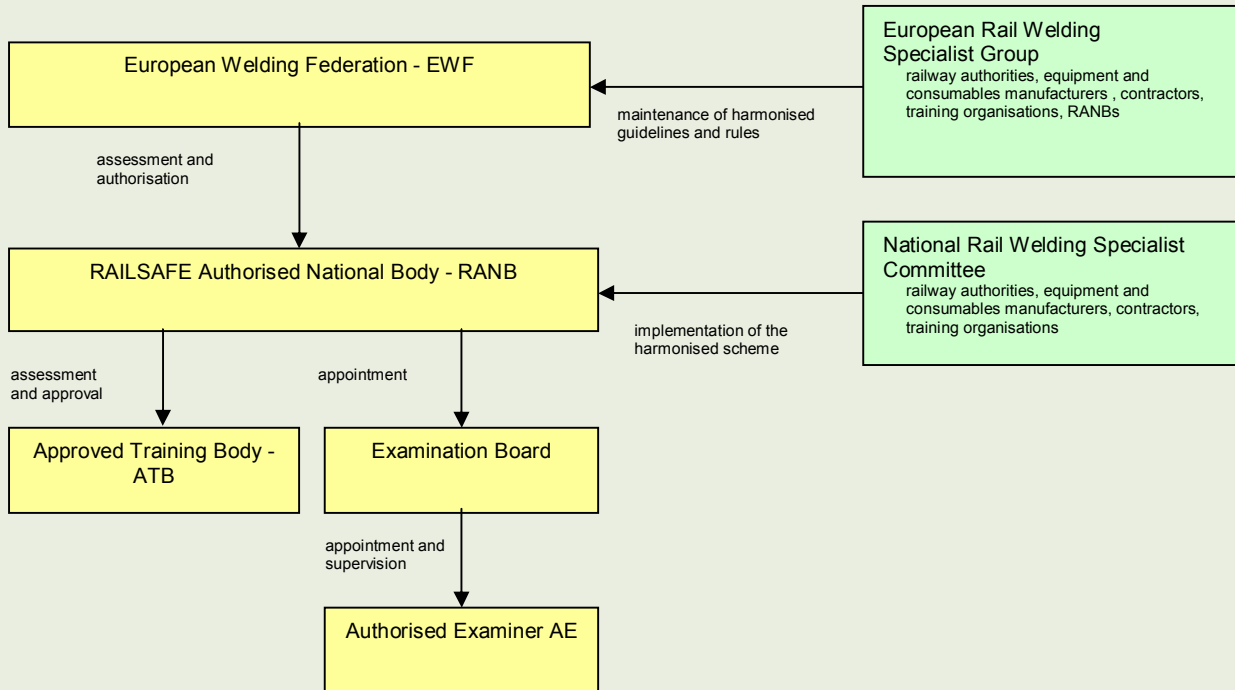
Back in 2003 EWF, in its continuous search to find ways to improve the welding education in Europe, realised that the harmonization of the qualification and certification of track welders in Europe was non-existent. More over, at the time and yet in the present, a number of accidents and near-accidents have happened. These accidents result not only in injury to (and sometimes in death of) passengers, but also in downtime of the railway service and therefore loss of money. The rail industry was quite naturally worried with the situation and interested in finding solutions to avoid such accidents.



Since one of the causes identified was failure of the welds in the rails, it seemed a reasonable approach to take solid steps in guaranteeing the competence of the welders.

It was then that the idea of a project to harmonise all the qualification and certification of track welders within Europe took place and led to the development of two projects aimed at creating a non-mandatory harmonised system for education, qualification and certification of railway track welders, RAILS SAFE (Aluminothermic Welding) and RAILS SAFE 2 (Arc Welding).

In order to maintain the necessary representativeness within the RAILS SAFE System the following structure and organization was reached:



According to the above structure, the European Welding Federation (EWF) applies special rules for RAILS SAFE Authorised National Bodies (RANBs) in each country that wish to implement the rail welder education, training, examination, qualification and certification scheme evaluating their capacity to implement the System in their own country. The national railway authority would normally be expected to take the role of the RANB, but may assign another party, like the national welding institute, to act on its behalf.

The rules will require the RANB to establish a National Rail Welding Specialist Committee for this activity with representatives of the national rail industry sector. The representation on this committee should include: railway authorities; rail welding contractors; the rail welding equipment and consumable manufacturers that are active in the country concerned; rail welder training organisations. The National Rail Welding Specialist Committee advises the RANB on the conduct of its affairs in relation to the implementation of the RAILS SAFE education, training, qualification and certification scheme.

A European Rail Welding Specialist Group will also be established on a European level to maintain the harmonised guidelines and rules. The representation on this group includes: railway authorities; rail welding contractors; rail welding equipment and consumable manufacturers; rail welding training organisations; RANBs.

Today, the qualification and certification of Aluminothermic Welders for joining of rails within the RAILS SAFE System is available and already being implemented in The Netherlands by ProRail, National Railway Authority, and by NIL, the National Welding Institute.

# RAILSAFE 2 RESULTS

In order to determine the requirements of the railway authorities and the industry for the education, qualification and certification of railway track welders, draft documents were produced on the performance objectives of welders. These draft documents were discussed by railway track welding experts in workshops throughout Europe, assuring the involvement of several players across Europe. From those discussions the document that constitutes the main result of the RAILS SAFE 2 comes out, the guideline that defines the **MINIMUM REQUIREMENTS FOR THE EDUCATION, TRAINING, EXAMINATION, QUALIFICATION AND CERTIFICATION OF A EUROPEAN ARC WELDER FOR RAILWAY TRACKS**:

- **EUROPEAN ARC WELDER FOR RAIL JOINING (EAWRJ)**
- **EUROPEAN ARC WELDER FOR RAIL RESTORATION (EAWRR)**

## Validation of the Guideline

The validation of the guideline was a continuous process, starting with the workshops where the guideline was discussed and the views of the experts attending the workshops were gathered and implemented into the guideline so as to have the necessary European complementarity.

The final step in the validation of the guideline was accomplished by organizing three Pilot Courses in three different countries in order to have different views of the application of the guideline in three different realities. The countries chosen were United Kingdom, Romania and Portugal.



The RAILS SAFE 2 Guideline covers two welding processes, Manual Metal Arc Welding (MMA) and Flux Cored Arc Welding (FCAW) which are used for joining and restoring rails.

Taking into consideration the different realities in each country, the course covering the restoration of rails using MMA was used in the United Kingdom and in Portugal. On the other hand and because the joining of rails by arc welding is widely used in Romania, the course addressed was the joining of rails using the MMA process. After each course a inquiry was done to the students in order to evaluate the courses.

The courses in Romania and Portugal were held within the period of three weeks reaching the minimum number of hours defined in the draft Guideline. The course in the UK was four weeks long and exceeded the minimum hours given in the draft of the Guideline.

All students completed the pilot courses with good scores, making the pilot courses a success in terms of performance and a good sign that they were well structured and the guideline accomplished the purpose to which was created. Also, the feedback from the students towards the courses was very positive, pointing out that some students considered the idea of having a European Diploma an advantage.



In terms of impact, the pilot courses allowed the creation of close contacts with the National Railway Authorities in each country, as well as with National Authority actively participating in the organization of the pilot courses, permitting to focus on the main issues of the arc welding application in the railway infrastructure of each country.

The principles in which the RAILS SAFE System based on when developing the above mentioned activities, and also the impacts this project envisaged were:

- to have trained and certified railway track welders available for railway companies to assure the quality and reliability of the railway tracks and thus reducing accidents and downtime caused by welding problems;
- to harmonise education, qualification and certification making the exchange of specialised welders for national railway authorities and companies in the European Union possible;
- to assure the quality of and access to continuing vocational education and certification for life-long competences and better employability of railway welders across national borders.