



Recommendations for Improved Safety for Electricians in Europe

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Project: Safety4EI
Improved Safety for Electricians

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About the Safety4El project

The Improved Safety for Electricians project is inspired from statistics related to major European health and safety issues. The number of work-related accidents in European Union differ a lot, e.g. according to the standardised incidence rates of fatal injury at work, excluding road traffic accidents and accidents on board transport in the course of work for 2012 (Eurostat, ESAW, 2012¹) Denmark is about the average in the European Union, but still double the numbers from United Kingdom. Similar numbers are found in Spain, Cyprus, and Malta.

In Denmark, the National Research Centre for the Working Environment sent a questionnaire to 50,000 employed workers and received 27,000 responses (March 2014) that showed electricians compared to other work groups are involved in more than average numbers of accidents and suffer from more than average physical strain; e.g. working on knees or squatting 61.19% compared to average for all groups of 17.2%, lifting or carrying more than a quarter of the work time 56.57% compared to an average for all groups of 30.68%, and working with arms lifted 51.43% compared to average for all groups of 18.33%.

Different regulations also present barriers to mobility. Safety4El sought to remove such barriers by developing training modules and, in association with employer organisations and unions, sought to influence policy makers to work towards a recognised European certificate.

As difficulty with foreign languages is by far the most feared problem when European young people contemplate working or studying abroad, the content of the course modules have been prepared so it may be used as part of Content and Languages Integrated Learning (CLIL), ²the CLIL scaffolding mainly is based on online units with all words linked to dictionaries in 118 languages – this will help prepare craftsmen and apprentices for mobility.

Objectives

The Safety4El objectives call for a trans-European approach to ensure much needed research and documentation of differences between the electrotechnical regulations in the five countries and development of a common course curricula with matching content that can be used online, during in-services courses, and integrated in VET.

¹ <https://ec.europa.eu/eurostat/web/products-statistical-working-papers/-/KS-RA-12-002?inheritRedirect=true>

² <http://www.languages.dk/>



SAFETY4EL Country Specific Findings

To become a skilled electrician in the different partner countries, formal education is needed. The British system is used as a reference and compared to the other countries' systems. All countries are regulated by some common European standards and can have some national variations.

The source of all referred standards is built on Ds/hd 60364/IEC 60364. The IEC 60364, Electrical Installations for Buildings, is the International Electrotechnical Commission's international standard. This standard is an attempt to harmonize national wiring standards in an IEC standard and is published in the European Union by CENELEC as "HD 60364". The latest versions of many European wiring regulations (e.g., BS 7671 in the UK) follow the section structure of IEC 60364 very closely, but contain additional language to cater for historic national practice and to simplify field use and determination of compliance by electrical tradesmen and inspectors. National codes and site guides are meant to attain the common objectives of IEC 60364, and provide rules in a form that allows for guidance of persons installing and inspecting electrical systems.

Below you will find the individual country reports in your native language.

DENMARK: <http://Safety4El.net/docs/DK%20Report%20on%20Safety%20Training%20and%20Tests.pdf>

MALTA: <http://Safety4El.net/docs/MT%20Report%20on%20Safety%20Training%20and%20Tests.pdf>

SPAIN: <http://Safety4El.net/docs/ES%20Report%20on%20Safety%20Training%20and%20Tests.pdf>

UNITED KINGDOM: <http://Safety4El.net/docs/Report%20on%20Safety%20Training%20and%20Tests.pdf>

CYPRUS: <http://Safety4El.net/docs/GR%20Report%20on%20Safety%20Training%20and%20Tests.pdf>



Recommendations and Conclusions

- ✓ It has been acknowledged that the different regulations in European countries for electricians' training and tests present several barriers to mobility that need to be removed in order to facilitate mobility and prevent work related accidents. A European standard is needed to remove mobility barriers and prevent work accidents.
- ✓ Health and safety should be integrated in the EU mobility programmes and linked with national programmes. Progress has been achieved in many Member States to improve workplace health and safety, but important challenges remain. In this regard, Member States should ensure adequate investments in the education and training systems related to safety. Furthermore, a proper policy to provide the tools to address the challenges and hazards in the sector is needed.
- ✓ One of the obstacles to mobility is the language barrier. This factor can further increase the risk of suffering occupational accidents and diseases. If the language of the host country is not understood, there might be difficulties in complying with workplace safety procedures or warnings, and information can be misunderstood. This is why the training and recognition of the procedures should be similar and easily understood by students and staff. Students must be involved in hazard identification activities in order to develop their skills and familiarise themselves with the safety practices.
- ✓ It is crucial to create a European-wide health and safety culture with regular training engaging all persons involved, and for that end, investment in the inclusion of occupational health and safety in the programmes of education, employment, training and skills development is needed. This would promote better health and safety conditions for all workers as well as the provision of an enabling environment that leads to better health outcomes for young workers.
- ✓ The importance of safe mobility for empowering students and promoting safety at work at the same time should be taken into account at European level. Moreover, the importance of clear and effective communication in health and safety understandable and recognisable by all students should be endorsed.
- ✓ A coherent approach from different stakeholders is necessary: EU Institutions, Governments, employers, TVET institutions, etc. Higher priority should be given to health and safety at the workplace in European Union research programmes.
- ✓ To provide a peer-to-peer training, on the job training, daily toolbox talks, and worksite demonstrations can be effective in safety concepts, and in promoting good work practices.
- ✓ It is also important to provide a cross sector training for health and safety in the construction industry.



The Safety4El consortium has come to the conclusions that:

- In-service skilled electricians on an annual basis should pass a safety test similar to those presented at <http://www.Safety4El.net/moodle/>
- In-service skilled electricians on an annual basis should receive instructions on health and safety for work (online or through a formal course)
- Electricians' apprentices should, where applicable, learn about health and safety as an integrated part in other relevant subjects/lessons
- Electricians' apprentices should, before work-based training in industry, pass a safety test similar to those presented at <http://www.Safety4El.net/moodle/>

The Safety4El consortium has come to the recommendations that:

- annual tests should be identical across the EU and certificated by EC / EU-OSHA
- the course content for annual (formal or online) safety courses should be identical across the EU and certificated/approved by EC / EU-OSHA



Co-funded by the
Erasmus+ Programme
of the European Union



References

European Agency for Safety and Health at Work, 2009, OSH in the school curriculum: Requirements and activities in the EU Member States

European Agency for Safety and Health at Work, 2010, Mainstreaming occupational Safety and Health into university education

European Agency for Safety and Health at Work, 2018, National Strategies in the field of Occupational Safety and Health in the EU

International Labour Organization, 2018, Improving the Safety and Health of Young Workers

EU Strategic Framework on Health and Safety at Work 2014-2020 (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0332>)