perosh
PARTNERSHIP FOR EUROPEAN RESEARCH IN OCCUPATIONAL SAFETY AND HEALTH

INDIR-UV: EXPOSURE OF WORKERS TO INDIRECT UV- AND IR-RADIATION EMITTED BY ARCS, FLAMES AND THERMAL RADIATORS

BACKGROUND

Risk assessment in accordance to EU regulation 2006/25/EC is obligatory. Exposure limits for optical radiation are complex (dependent on time, distance, source and wavelength). There are certain situations of exposure above these limits in the case of direct exposition, e. g. the welder himself. Question arises if 3rd persones are overexposed. 3rd persons are persons working in the vicinity of the radiation. It's quite a complex task to give a profounded answer. The whole setting (parameter of the technical process, time, vicinity, …) has to be taken into account. Thus, there is a need to reduce this complexity with a worst-case model. The model can be used by safety experts for risk assessment.

OBJECTIVES

The objective of the project is to enable safety experts to do profounded risk assessment with a model, developed in this project. The model is based on measured data. This project aims at the following three outputs:

- Afford a legally compliant risk assessment,
- Reduce complex limits and measurements to factors for basic risk calculation,
- Publish model and tool for risk assessment.

DELIVERABLES

There will be 2 written publications on OSH in the field of optical radiation, one about the accuracy of measurements and equipment in the field of optical radiation, one about the developed model for risk assessment. The model and its concept will be published. The measured data will be available for the project partners for comparison and further developments like online-tools.

RESEARCH METHODS

The project will summarize already existing exposure data and merge it with measured data. Round robin tests will show the accuracy of the measurement equipment and procedures. A model based upon the data will be developed, which can be used for a simplified risk assessment at workplaces.

SCIENTIFIC RELEVANCE

There will be knowledge about the measurement accuracy in the field of optical radiation. The risk of different processes (e. g. welding) compared to others will be clarified. For further applications there will be modelling know-how.

PRACTICAL/SOCIETAL RELEVANCE

Enables companies to do legally compliant risk assessment in the field of optical radiation. It saves time and costs on the side of the employer, it saves unnecessary wearing of PPE on the side of the employee and it saves costs for consultation on institutions in the field of OSH, because it simplifies the method of risk assessment in the field of optical radiation.

PROJECT LEADER

DI Dr. Emmerich Kitz, AUVA

PROJECT PARTICIPANTS

Günther Ott, Erik Romanus, BAUA

Martin Schmitz, IFA

Agnieszka Ewa Wolska, CIOP-PIB

Annick Barlier-Salsi, INRS

Beatriz Diego Segura, INSHT