INRS SCIENCE
CONFERENCE ROUND

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RAPID CHANGES IN PROCESSES

Which occupational risks for which prevention?

Espace Prouvé, Nancy, France

Call for papers

Call for papers
Abstract submission deadline:
15 november 2021

28.29.30 June 2022

Registration: www.inrs-procedesenmutation2022.fr
Contact: procedesenmutation2022@inrs.fr

Call for papers

Conference objectives

Seventh in a series of conferences organised by INRS on occupational health and safety research, this conference will focus on the profound changes in industrial processes over the last twenty years. Processes have adapted to respond to four major developments:

- Increasing and more demanding consumption leading to a demand for new materials with controlled use properties.
- Increased flexibility requirements allowing different productions on the same industrial site.
- Imperatives to limit the resources consumed, reflected in the development of a circular economy with the reduction of the environmental footprint throughout products' life cycles, and the reuse of waste as raw materials..
- Mitigation of environmental impacts including the optimisation of energy costs and the development of new offshore energy sources, water savings and the reduction of pollutants in the environment.

Technologies as well as the resulting organisations are evolving very rapidly with implications involving working conditions and therefore the prevention of occupational risks that are difficult to anticipate. For example, the intensification of processes can limit employees' exposure to solvents but make their operation and maintenance more complex. Likewise, recycling leads to a lack of knowledge of the composition of secondary raw materials and possibly to the accumulation of toxic compounds without companies always being aware of this and having been able to adapt prevention measures to the new exposure conditions.

The main objective of this conference will be to review the risks, benefits and prevention approaches linked to these recent changes in the industrial sectors particularly impacted by them, in particular, the food industry, chemical industry, pharmaceutical industry, mechanics, metallurgy, water treatment, waste management and recycling activities.

This will include presenting the implementation of appropriate means of risk assessment and hazard identification, analysing how employees perceive these risks and hazards, and discussing technical but also organisational prevention solutions to limit the risks for workers.

Target audience

Researchers, experts, OSH practitioners involved in the various sectors of activity concerned by these process changes.

Conference structure

Two and a half days with no parallel sessions. Sessions with keynote speakers and speakers selected for oral or poster presentations. The official languages of the conference are English and French. Simultaneous translation will be provided during the oral presentations.

Main topics

This review will be based on the processes affected by the four changes below:

- **Limitation of resources consumed, emergence of a circular economy:** Worker exposure, risk analysis (chemical, biological), prevention approaches, design of processes aimed at reducing exposure, case studies in activities such as the use of secondary raw materials (from recycling), waste recovery, new forms of organisation (industrial ecosystems). Identification or elimination of contaminants in recycled materials.
- **New modes of production:** Worker exposure, risk analysis (chemical, biological), prevention methods, design of processes to reduce exposure, case studies in situations where new processes such as 3D and 4D printing are implemented, modular and flexible processes, intensified or integrated processes, interface with digital technology. Risks associated with maintenance operations.
- **Use of new materials:** Employee exposure during the manufacture and use of new materials, prevention methods, design of processes to reduce exposure: polymer materials with specific properties, impact of the use of additives, link between exposure and usage properties.
- **Limitation of environmental impacts:** Consequences in terms of occupational risks, prevention approaches linked to new practices to reduce the environmental footprint such as new ways of using energy, water savings, reducing emissions, solvent substitution.

Organising committee

Catherine Aubry
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Patricia Dirrenberger
Amandine Hobet
Louis Laurent
Aline Marcelin

Scientific committee INRS

Louis Laurent

Emmanuel Belut
Jean Christophe Blaise
Patricia Dirrenberger
Fabien Gerardin
Hubert Monnier
Davy Rousset
Eric Silvente
Jérome Triolet

Conference venue

Centre de congrès Prouvé

NANCY
FRANCE

International Scientific Committee

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