

ACES project was presented at the CoMS_2020/21 international conference

The 2nd International online Conference on Construction Materials for a Sustainable Future (CoMS_2020/21, <https://coms.zag.si/>) was held from the 20th to 21st April 2020. The conference focused on the sustainable development of the construction sector, which is one of the important factors in achieving the EU's climate change objectives. Due to coronavirus restrictions, the conference was organized on-line.

The CoMS_2020/21 conference was attended by more than 130 delegates coming from 19 countries. Besides the plenary and keynote lectures, oral presentations and posters, special project networking and dissemination showrooms were available, where the **ACES project** was presented among 16 other projects.

The **ACES showroom** presented the overall project information and activities, and the conference participants had a chance for direct interaction with the project representatives. More information is available on the following print-screens.

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CoMS 2020/21 CONSTRUCTION MATERIALS FOR A SUSTAINABLE FUTURE
2nd International Online Conference CoMS 2020/21
April 20 to 21, 2020

PROJECT SHOWROOM

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fire-safe sustainable built environment

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ACES project Showroom



CoMS 2020/21

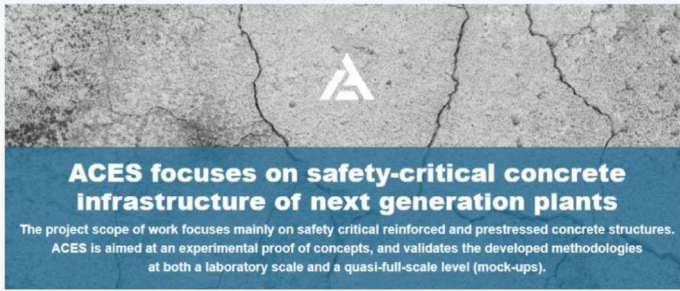
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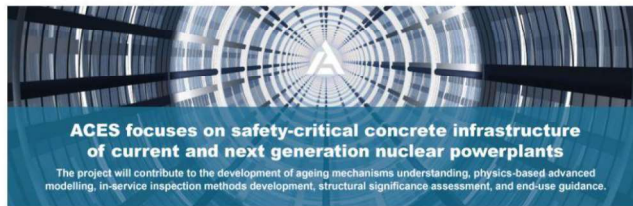


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ACES

The purpose of ACES is to advance the assessment of safety performance of safety-critical concrete infrastructure by addressing remaining scientific and technology gaps for the safe and long term operation of nuclear power plants.

Poster design



What is ACES projects in a nutshell

The purpose of ACES is to advance the assessment of safety performance of safety-critical concrete infrastructure by addressing remaining scientific and technology gaps for the safe and long term operation of nuclear power plants.

Project's goal

The main objective of ACES is to advance the assessment of safety performance of civil engineering structures by solving the remaining scientific and technological problems that currently hinder the safe and long-term operation of nuclear power plants reliant on safety-critical concrete infrastructure. Proper understanding of deterioration and ageing mechanisms requires a research strategy based on combined experimental and theoretical studies, following a multidisciplinary approach, and utilizing state of the art experimental and modelling techniques. Material characterization at different length scales (i.e. nano, micro, meso, and macro scales) is necessary, focusing on the physical understanding of the degradation processes (e.g. neutron and gamma radiation, internal swelling reactions, liner corrosion, etc.) as well as physical phenomena (drying, creep, shrinkage, etc.), and their influence on macroscopic mechanical properties and structural/functional integrity of the components.

Expected Outcomes

The ACES project aims at having a significant impact on the safety of operations (gen II and III NPPs) and impacting the design of next-generation plants. ACES will improve the understanding of ageing/deterioration of concrete and will demonstrate and quantify inherent safety margins introduced by the conservative approaches used during design and defined by codes and standards employed throughout the life of the plant. The outcomes from ACES will therefore support the LTO of NPPs. This will be achieved by using more advanced and realistic scientific methods to assess the integrity of NPP concrete infrastructure. The project will provide evidence to support the methods by carrying out various tests, including large scale tests based on replicated scenarios of NPPs.

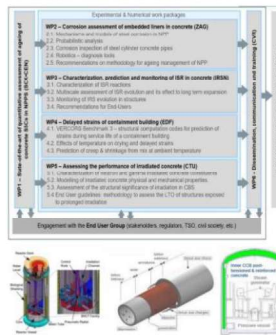
Start date: 1st September 2020

Runtime: 4 years

EC funding: € 3 999 562,32

Coordinated by Teknologian Tutkimuskeskus VTT OY Finland

The ACES implementation plan consists of seven work packages. Figure illustrates the overall structure of the ACES work plan. The ACES work packages are:



ACES is funded by the European Union under the Horizon 2020 programme.

www.aces-42020.eu

Project's Partners



Partners

ACES focuses on safety-critical concrete infrastructure of current and next generation nuclear power plants

The project will contribute to the development of ageing mechanisms understanding, physics-based advanced modelling, in-service inspection methods development, structural significance assessment, and end-use guidance.

[More about ACES](#) [Our consortium](#)

Workplan
Consult the project structure, and learn about the planned research
[Project roadmap](#)

Project Deliverables
Consult completed project deliverables
[Deliverables](#)

Downloads
Download dissemination material such as newsletters, etc.
[Go to downloads](#)

Chat

The connection is open and ready to communicate.

Nina Gartner NG
Dear Guest, welcome to the ACES project showroom. The project started in September 2020, activities are already well going. We invite you to search through the presented material. If you have any questions, please feel free to post them here and we will do our best to provide all inquired information. Nina Gartner, on behalf of the ACES team