PRESS RELEASE

Pierrelatte, 31st May 2021

European H2020 Research & Innovation Project

LD-SAFE

Laser Dismantling Environmental and Safety Assessment

INTRODUCTION

Up to now, only a few of the nuclear power reactors permanently shut down had been fully decommissioned. Based on the information provided by Member States, EU nuclear operators estimated that more than EUR 120 billion will be needed for nuclear decommissioning over the next 30 years. Hence, there is a powerful economic incentive to fund development and uptake of more efficient industrial applicable technologies.

DISMANTLING CHALLENGES

The dismantling of the internals is known to be the most challenging part technically (complex shapes and access), mechanically (radiation hardening of the metal and combinations of materials) and in terms of safety (highly radioactive, activated, components located closer to the surface). This task currently requires years of planning and at least a year longer to execute (often on the critical path of the project).

LD-SAFE PROJECT

LD-SAFE is a H2020 project under the call NFRP-09 "Fostering innovation in decommissioning of nuclear facilities" funding by the European Commission (Euratom). It is being carried out by a European consortium coordinated by Onet Technologies, composed of 5 other members (CEA, IRSN, Tecnatom, Engie Solutions and Vysus Group) and has started in July 2020 and will be achieved in 2024.

LD-SAFE is focusing on removing the last technical, financial and psychological barriers to propose the laser cutting technology as an alternative to the conventional cutting techniques used for the decommissioning of power nuclear reactors and mainly their internals (RVI) and pressure vessels (RPV).

The purpose of the LD-SAFE project is to demonstrate that both the in-air and underwater laser cutting technologies are effectively operational for the dismantling of the most challenging components of power nuclear reactors and that, for this application, the laser cutting technique:

- Is as safe as the best cutting techniques currently used, even safer for the workers and environment;
- Does not add any new constraints;
- Is more cost effective to dismantle the challenging power reactor components;

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- Is simpler to implement on site and suited to the complex dismantling of reactor internals.

At the end of LD-SAFE, the suitability of the laser cutting technology to address the challenges of the dismantling power nuclear reactor and its capability to improve these projects in respect of safety, radioactive waste, time and cost will be confirmed on the basis of the demonstrators and the other project outputs as the Technology Qualification and the Generic Safety Assessment.

ADVISORY BOARD

In order to provide an external point of view on the project, an Advisory Board completes our LD-SAFE organization. It plays the role of an ecosystem for providing inputs for running the project and for ensuring the match between project results and market, societal, and environmental needs. It is composed of 3 groups:

- Expert Group: Experts on laser safety, conventional cutting techniques for dismantling of reactor pressure vessels and internals, nuclear safety, and dismantling project management.
- End User Group: Dismantling Operators and Contractors, Research & Technology Organizations and Technical Safety Organizations interested in the results of the project.
- Support Group: Groups with activities whose inputs or outputs are connected to LD-SAFE objectives.

PROJECT DETAILS

- LD-SAFE project website: https://ldsafe.eu/
- Project description:
  - CORDIS: https://cordis.europa.eu/project/id/945255
  - SNETP: https://snetp.eu/portfolio-items/ld-safe/
  - ETSON: http://www.etson.eu/node/109

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- LinkedIn Page: LD-SAFE Project
- Twitter account: @ld_safe

CONTACT DETAILS

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