



Launched in October 2020, AMHYCO will improve experimental knowledge and simulation capabilities in the combustion risk management of hydrogen and carbon monoxide (H_2/CO) mixtures in severe accidents in nuclear power plants.



STRATEGIC OBJECTIVES

1 Experimentally investigate phenomena that are difficult to predict theoretically

Such as H_2/CO combustion and PARs (Passive Autocatalytic Recombiners) behaviour under realistic accidental conditions, taking into account their interaction with safety systems.

2 Improve the predictability of analysis tools

Including Lumped Parameter (LP), 3D and Computational Fluid Dynamic (CFD) codes – used for explosion hazard evaluation inside the reactor containment and providing support to Severe Accident Management Guidelines (SAMGs) design and development.

3 Improve the SAMG

For both in vessel and ex-vessel phases with respect to combustible gases risk management, using theoretical, simulation and experimental results.

SPECIFIC IMPACTS

Improve the understanding of H_2/CO combustion through a database of experiments.

Strengthen the quality of future evaluation and design of combustion mitigation systems.

Enhance the combustion risk management in nuclear power plants.

Contribute to long term operation upgrades of Gen II & III reactors.

12 PARTNERS

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