

Supporting R&D in Infrastructures for Gas Cooled High Temperature Reactors (GFR)

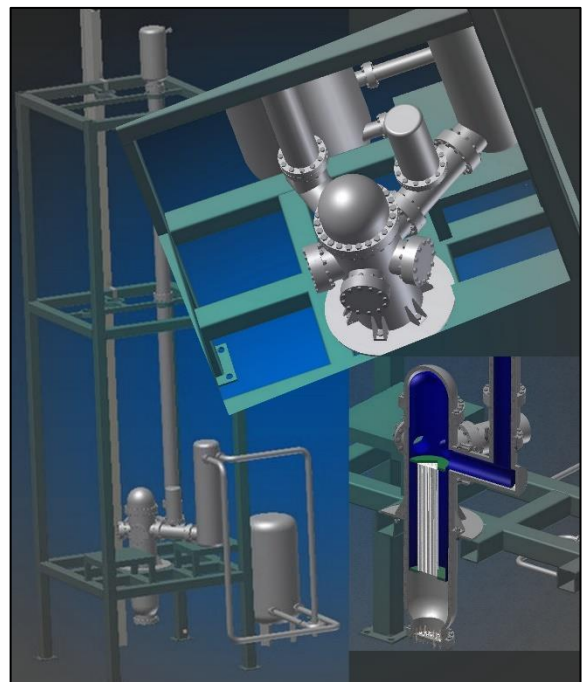
In the Czech Republic, the large infrastructure co-funded by EU Structural Funds (SUSEN) will be finalized in June 2017. One of the key facilities is the S-ALLEGRO loop that will be the first experimental facility (mock-up) supporting the helium-cooled fast reactor (GFR) thermal-hydraulic and Decay Heat Removal (DHR) system research activities. The purpose of the unit is to perform model verification of essential safety characteristics of GFR and its reactor demonstrator ALLEGRO. The experimental program using this loop should verify capability and efficiency of decay heat removal (DHR) system, which is a crucial safety issue for GFR concept.

Experimental program using S-ALLEGRO facility will study and demonstrate key safety issues as follows:

- Static and dynamic behavior under Interactions between primary and secondary system
- Decay heat removal using natural circulation
- LOCA experiments using organized leaks system
- DHR cool ability using heavy gas injection system
- Decay heat removal using forced circulation

S-ALLEGRO Helium Loop Parameters

Medium: helium
Pressure: 7 MPa
Max. Temperature: 850 °C
Power: 1 MW
Flow rate: ~1800 kg/h (0.5 kg/s)



Gas Cooled Fast Reactor (GFR) – GIF Webinars

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The Gas Cooled Fast Reactor (GFR) is one of the six promising technologies selected by the Generation IV International Forum (GIF). The presentation on February 22nd 2017 summarized the main advantages and drawbacks of GFRs and the key design and safety issues as well as the related research and development programs. Presentation was given by Alfredo VASILE from CEA, France. He is presently project manager of the ESNII Plus European Project on fast reactors, the French representative at the IAEA Technical Working Group on Fast Reactors, GIF GFR Steering Committee, GIF GFR conceptual Design and Safety and GIF SFR Safety and Operation Project Management Boards. He is the CEA representative for the ALLEGRO GFR experimental reactor projects, including VINCO.

Euratom Signs the GIF Framework Agreement Extension

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On 10 November 2016 in a ceremony organized at the European Commission in Brussels, Commissioner Tibor Navracsics signed the Framework Agreement Extension on behalf of Euratom, in the presence of Mr. Vladimír Sucho, Director-General of the Joint Research Centre (JRC) of the European Commission and Policy Group member, as well as representatives from the NEA Office of Legal Counsel and the GIF Technical Secretariat. The ten Signatories of the Framework Agreement, which expired in February 2015, have now all signed the ten-year Extension. It means new opportunity also for GFR and V/HTR reactor systems.