

## Activity Plan of the V4G4 Centre of Excellence association for 2017

The V4G4 Centre of Excellence (V4G4) is governed by the General Assembly (GA) and the Steering Committee (SC). The technical cooperation is organised by the Project Coordination Team (PCT), while legal matters belong to the activity field of the Working Group on Governance and Financing (WGG). The technical activities are concentrating on the ALLEGRO Project (preparatory phase) which was launched by the members of the association in 2015.

The following activities are foreseen for 2017.

### General Assembly

The GA has to approve the Annual Report on 2016 and the present Activity Plan. This will happen at the meeting scheduled for January 27 in Řež. GA has to approve the joining of CEA as an associated member. As a consequence, certain legal documents of the association have to be modified by GA. No other obligations are foreseen.

### Steering Committee activities

The V4G4 SC will have its 22nd meeting on January 27 in Řež. At least one other SC meeting will be arranged in 2017 (to be held most probably in Warsaw). Further SC meetings can be organised if requested.

If the ALFA H2020 proposal is accepted, the preparatory steps of the project will be arranged with the full involvement of SC members, thus probably an extraordinary meeting will take place.

Besides receiving continuous information on the progress of PCT activities, national projects and the VINCO project, SC has to decide on

- the planned MoU related to MBIR activities
- the approval of the document „Safety Specifications and Objectives”
- the actualisation of the V4G4/ALLEGRO leaflet

has to review the document “Progress of ALLEGRO RDQ needs and potential means” and has to organise a HTR/GFR meeting to identify potential synergies between the two activities. Further subjects may be put on the agenda of SC if needed.

### Technical activities (PCT)

PCT will have at least three meetings in 2017, preceding the SC meetings. The 5<sup>th</sup> PCT meeting is scheduled for January 25-26 in Řež and the 6<sup>th</sup> PCT meeting, will be held in Budapest at the end of May 2017. The 7<sup>th</sup> PCT meeting will be in September/October the place is not defined yet.

**The most important activities in 2017 are as follows.**

- the first performing and evaluation of the thermohydraulic calculations for most critical transients (end of June 2017)

Transient	Scram	Breach	DHR loops	Water ingress	N2 Accus	Main blowers	GV integrity	Note
Internal break	yes	Internal	N/A	no	N/A	1 pony	N/A	C
SBO + WI	yes	no	3 NC	1 tube DHR	N/A	0	N/A	M
LB-LOCA + SBO	yes	10" main or DHR cold	3 NC	no	3	0	yes	C, M
SB-LOCA + SBO	yes	3" main or DHR cold	2 NC or 1NC (DHR break)	no	2	0	yes	C, M, R
LOCA Guillotine	yes	1 main duct	3 FC	no	3	0	yes	C, M
UCRW	no	no	N/A	no	N/A	2	N/A	SIMMER
USB-LOCA	no	3" main cold	N/A	no	3	2	yes	C
UWI	no	no	N/A	1 Tube DHR	N/A	2	N/A	
ULOFA	no	no	N/A	no	N/A	2 pony	N/A	SIMMER

- TH Modelling of critical transients with thermohydraulic codes for the new core configuration.
- Solution of potential unprotected transients Feasibility and optimization of the appropriate backup pressure in the guard vessel for the most critical scenarios, especially in LOCA aggravated with SBO in passive mode.
- HELIOS utilization and development of ALLEGRO oriented cross section library for the DYN3D-MG (CEA concept 2009):
- SERPENT utilization - preparation for HELIOS replacement
- Full implementation of HELIOS-based cross section library into existing ALLEGRO models
- Tuning of ALLEGRO models, re-evaluation of radial and axial power distribution – 2018

#### **Legal matters (WGG)**

Legal issues may arise in connection with the joining of CEA as an associated member. WGG should return to the actual evaluation of Background and Foreground only in 2018.

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