

Forum on Future International IVR activities

Juan les Pins, Palais des Congrès, France
January 23, 2020

Objectives of the forum

The IVMR seminar will be followed by a forum, open to all participants interested in continuing R&D about IVR. The purpose of the forum is to provide inputs for the R&D orientation of new research projects and to discuss about possible frameworks to continue collaborative R&D actions about IVR.

This forum will focus on defining priorities for R&D on IVR and listing all the relevant experimental facilities or possible new facilities that could provide new and useful data for the improvement of the evaluation of IVR.

F O R U M P R O G R A M

January 23

- Existing and future experimental facilities for IVR. Participants are invited to provide information about their facilities and possibilities of use in the future.
- Planned international and national projects on IVR (EC, IAEA, OECD/NEA, ...)
Participants are invited to provide information about existing projects or project proposals including activities related to IVR.
- Discussions on possible frameworks for future collaborations



BY PLANE
Nice Côte d'Azur International Airport,
17 km from Antibes
Juan-les-Pins.

BY TRAIN
2 railway stations:
▪ Antibes SNCF railway station
(high speed trains & regional lines).
▪ Juan-les-Pins SNCF railway station
(regional lines).

BY ROAD
A8 motorway, known as "La Provençale",
exit 44. Take the road to Antibes centre,
then Juan-les-Pins.

Practical information

- Registration, hotel reservation and information are available at www.ivmr2020.com.
- Several hotels of all categories can be found in Juan les Pins, within walking distance from the Palais des Congrès.
- Juan les Pins can be reached easily from Nice International Airport.

Contact:

Florian Fichot (IRSN), florian.fichot@irsn.fr

JANUARY 21-22-23/2020

IVMR

INTERNATIONAL SEMINAR

Announcement

In-vessel retention: outcomes of IVMR project

IRSN
INSTITUT
DE RADIOPROTECTION
ET DE SÛRETÉ NUCLÉAIRE

European
Commission

JUAN LES PINS

Palais des Congrès, France

International Seminar

“In-vessel retention: outcomes of IVMR project”

Juan les Pins, Palais des Congrès, France
January 21-22, 2020

Objectives of the seminar

The last international seminar on in-vessel corium retention (IVR) was organised by IRSN and EC-JRC in June 2016, in Aix-en-Provence (France), with the sponsorship of ETSO. It was followed by an IAEA Technical Meeting, in October 2016, on “Phenomenology and Technologies Relevant to In-Vessel Melt Retention and Ex-Vessel Corium Cooling”.

Currently, new reactor designs (AP1000 and HPR1000 in particular) involving an IVR strategy were built in different countries and some of them are already in operation. Therefore it is important to share, as much as possible, scientific knowledge and methodology about IVR in order to help safety authorities taking decisions. For this, a consensus on several issues should be reached between R&D experts.

The first objective of this seminar is to present the main outcomes of the European project IVMR (2015-2019) and to draw conclusions from that project. Among the main issues, the impact of transient evolutions of oxide and metal layers on the focusing effect and the issue of the long term mechanical behaviour of the ablated vessel wall will be discussed in details. Issues about external cooling efficiency, innovations and back fitting will also be addressed.

A second objective is to bring together an international panel of actors involved in severe accident management issues, either from the regulatory side or from research or industry, in order to share knowledge and views about the IVR strategy. Through panel discussions and technical sessions, all the important issues of the IVR strategy will be covered and discussed. The technical sessions will also include presentations from experts out of the IVMR project, in order to give the widest overview as possible on the IVR topic.

S E M I N A R P R O G R A M

January 21

- Summary of IVMR project and progress made on the knowledge.
- Synthesis of reactor calculations: towards a more deterministic approach.
- ERVC new experiments and CHF correlations: towards a synthesis.
- Mechanical behavior of ablated vessel: towards a mechanical criterion for IVR assessment.
- Influence of design on IVR: main conclusions from comparison of several designs.
- Panel discussion on practical applications.



- Gala dinner

January 22

- The stratified pool: experiments and modelling.
- CFD of molten pool and metal layer: important consequences for the focusing effect.
- Corium/metal properties and chemical interactions: new insights.
- Methodology of IVR safety assessment: evolution of the safety evaluation criteria.
- Panel discussion on the methodology of IVR assessment (safety authorities, TSOs, ...)



W W W . I V M R 2 0 2 0 . C O M