



Technical Meeting on the Deployment of Advanced Manufacturing Solutions for the Nuclear Power Industry

**IAEA Headquarters
Vienna, Austria**

19 - 23 August 2024

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Information Sheet

Introduction

Advanced Manufacturing processes are being utilized in various industries and recently shown its ease of adaptability in the rapid advanced manufacturing of COVID-19 medical and personnel protective equipment, urgently needed throughout the world. Nuclear and non-nuclear manufacturers, nuclear operators, universities, and research centres are developing advanced manufacturing processes to support operating nuclear power plants as well as small modular and advanced reactor designs. Examples include, but not limited to, prototyping of new tools, advanced construction/manufacturing techniques, and the replacement of obsolescent parts that are no longer produced by the original manufacturer. Innovative advanced manufacturing processes are utilizing technological advances but may face the challenge of meeting existing specifications and standards at nuclear power plants that have not accounted for new manufacturing processes resulting in slow implementation to support nuclear power plants and their projects.

The IAEA's International Network on Innovation to Support Operating Nuclear Power Plants (ISOP) and Nuclear Harmonization and Standardization Initiative (NHSI) have identified advanced manufacturing as an innovative technology of interest to stakeholders in the Member States.

Objectives

The purpose of the event is for Member States to discuss and share examples of the use of advanced manufacturing solutions that have been applied in their nuclear power projects or existing nuclear power plants. Member States will have the opportunity to discuss how the need for the innovative use of advanced manufacturing was determined, how the technical and economic feasibility of the solutions deployed were determined, and the lessons learned during implementation. The meeting will also be an opportunity to discuss current research and development underway in Member States to support near term plans.

Working Language(s)

English

Working Material

The template of the presentation/report and other meeting materials will be provided to the participants prior to the meeting.

Scope

The scope of this event includes challenges faced and success stories by the industry, manufacturers and operating nuclear power plants to implement advanced manufacturing. Advanced manufacturing processes that can be discussed, but not limited to, are the following:

- Structure manufacturing: powder metallurgy, metal additive manufacturing, spark plasma sintering, cryogenic machining, in-process control and qualification, non-metallic manufacturing
- Welding technology: electron beam welding, solid state friction stir welding, laser welding, in-situ welding control and real-time monitoring, irradiated material welding.
- Advanced cladding: cold spray, diode laser cladding, friction stir additive manufacturing
- Reactor construction: self-consolidating concrete, high strength rebar, modular manufacturing to support construction

Any other related processes under development by participants are welcome to be discussed during the meeting.

Topics

Please refer to “Objectives” for examples of topics.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **25 June 2024**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
 - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
 - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
 - Search for the relevant event under the ‘My Eligible Events’ tab;
 - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
 - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
 - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
 - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **25 June 2024**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency’s Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and

assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning the IAEA InTouch+ platform.

Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above. The detailed report (.docx) is also encouraged to submit, it might be integrated to the possible IAEA Technical Report.

Presentations should be prepared as Microsoft PowerPoint (.ppt) or Portable Document Format (.pdf) files. Computer-based projection facilities will be provided. Authors are requested to provide the Scientific Secretary with electronic copies of their presentation files in advance of their scheduled presentation slot so that the files can be duly uploaded. Electronic versions of the presentations are also necessary to ensure timely issuance of the proceedings to be prepared and distributed in electronic form.

It is not mandatory for all participants to submit a presentation or report. However, the IAEA welcomes and encourages contributions in this format. Time for the presentations will be limited to 25 minutes followed by a five-minute discussion period.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **25 June 2024**.

Venue

The event will be held at the Vienna International Centre (VIC) where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

<https://www.iaea.org/events>.

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

Organization

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on other matters related to the event to the Administrative Secretary.