

# Workshop on “Life Cycle of PHWR Coolant Channels”

A workshop on ‘Life Cycle of PHWR Coolant Channels’ was organized by SRI-AERB during August 02-05, 2021 to foster commitment for safety among all primary stakeholders. The coolant channels in PHWRs constitute the heart of the reactor and hence play vital role in plant performance and safety. The workshop has provided the platform to disseminate and share the works from state of art experimental & analytical studies as well as operational experience covering the life cycle of coolant channels from design, material, manufacturing, installation, commissioning and operation to En Masse coolant channel replacement.



**Shri. G. Nageswara Rao, Chairman AERB delivering the inaugural address**

Shri. G. Nageswara Rao, Chairman, AERB inaugurated the workshop and delivered the inaugural address. In his inaugural address, Chairman stressed the paramount importance of safety in nuclear industry and underlined the evolution coolant channel material has undergone to overcome various operational challenges. Shri S. K. Mehta, former Chairman ACPSR; Shri D.S. Choudhary, Director(O), NPCIL and Shri C.S. Varghese, Executive Director, AERB also addressed the participants and highlighted the

significance of dissemination and exchange of information on such an important topic. Dr. R. K. Sinha, former Chairman, AEC delivered the keynote address through online platform bringing in glimpses of historical development of pressure tubes of PHWRs and highlighted the analytical and experimental works performed to get insight into the behavior of coolant channel material. He also emphasized adoption of transparent and scientific approach to safety.



**Dr. R. K. Sinha, former Chairman, AEC delivering Keynote Address through online platform**

Around 90 engineers/scientists from the utilities/plant sites, regulators and research organizations from various DAE units participated in this workshop. Twelve invited talks were delivered over a period of four days by speakers from different DAE units and AERB. The talks covered a wide range of topics/ such as:

- Overview of Coolant Channel Design
- Material and Manufacturing Aspects
- Installation and Commissioning of Pressure Tubes
- Regulatory Requirements of Coolant Channels
- Life Management Activities of Coolant Channels.
- Operating Experience and Overview of Recent PT Related Incidents
- En masse Coolant Channel Replacement Activities



### **Dignitaries and Delegates in the Workshop**

In the concluding session, participants acknowledged that workshop helped in sensitizing the stakeholders about the challenges associated with life cycle management of coolant channel and its importance in the growth of PHWR technology. Also, several recommendations and suggestions were provided towards further improvement of coolant channel inspection techniques considering real time data acquisition system. Apart from that, more impetus was given on R&D in the domain of material characterization and life management as well as reorientation of the collaborative research activities were emphasized.

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