Government of India
Indira Gandhi Centre for Atomic Research
Reactor Design and Technology Group
Experimental Thermal Hydraulics Division

CERTIFICATE OF SUCCESSFUL COMPLETION

A third passive shut down system is envisaged for future fast breeder nuclear reactors coming up in the country. This is called hydraulically suspended absorber rod (HSAR) and gets dropped to the nuclear reactor core when the coolant flow is reduced below a specific value. This ensures the shutdown of the fast breeder nuclear reactor without any external intervention in the case of a remote probable loss of flow incident. Instrumentation Ltd Palakkad has developed the upper plug of HSAR which is the most critical part of the system with respect to the hydraulic performance. The upper plug of HSAR was designed, manufactured and tested as per the requirements set by Indira Gandhi Center for Atomic Research, Kalpakkam. The same was delivered to Indira Gandhi Center for Atomic Research and the testing at the operating conditions was also successfully completed.

13/01/2022

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In Indian fast breeder nuclear reactors, the decay heat produced after the reactors shutdown is being removed by passive systems without any external power. Heat transport from reactor core to atmosphere is through the forces generated by natural phenomena. This is to ensure the absolute safety of the reactor systems. Instrumentation Ltd Palakkad has developed a two louver air damper system for the decay heat removal in Indian fast breeder nuclear reactors in which one louver operates completely with gravitational forces and without any external power. This damper system was designed, manufactured and tested as per the requirements set by Indira Gandhi Center for Atomic Research, Kalpakkam. The same was delivered to Indira Gandhi Center for Atomic Research and the testing at the operating conditions was also successfully completed.

13/01/2020

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