

Universal floating cooler

Modular, Floating Cooler Solution for Spent Fuel Pools

Framatome's generic floating cooler solution enables you to realize maximum efficiency pool cooling while minimizing structural impact and greatly reduced design, layout and recertification expenditures. Its modular floating design provides flexible adaption to your cooling requirements while maximizing usable pool space.

Challenge

Current spent fuel pool cooling solutions require anchorage at pool wall or rim or use plant-specific existing structures. Such structure invasive retrofit solutions complicate or even limit installations (e.g. due to pool recertification). Alternative cooling solutions for retrofit have lower performance as they reside in lower and cooler regions of the pool.

Fixed pool cooling solutions are vulnerable to inadvertent pool water level drops.

Fixed structure invasive cooling solutions require plant specific layout and design followed by extensive qualification efforts.

Solution

Framatome's floating cooler needs no liner penetration for retrofit installation. Therefore most of the plant specific design, layout and pool requalification/recertification together with associated costs in budget and time can be avoided.

In case of inadvertent pool level changes the floating cooler moves with the water level circumventing heat exchanger uncoverage.

Thanks to its floating design, the heat exchanger part always remains in the upper hot water layer securing maximum heat removal capacity at all times.

Framatome's leading competencies in advanced cooling solutions will avoid unneeded design-iterations and find a cost-effective solution tailored to customer requirements. Cost and capacity estimations will be met with high reliability.

References

Framatome's leading competencies in advanced cooling solutions at work:

- NPP Mühleberg (CH): Authority approval and commissioning of ACT cooling solution in 2017
- NPP Gösgen (CH): Wet storage cooling solution stage 2 in operation since 2020
- Feasibility studies for NPPs in Japan, Canada and Belgium

**Your performance
is our everyday commitment**

Customer benefits

- Greatly reduced plant specific design and certification cost due to generic design
- No requalification/recertification of pool
- Modular design allows flexibility to customer needs
- Cooler floats in top water layer granting maximum heat removal capacity even during pool level changes
- Floating design maximizes usable pool space
- No additional pool liner penetrations required
- Combination of competencies in advanced cooling solutions with the generic design of the specific floating cooler solution

Additional:

- Decommissioning: minimize overall operational and maintenance costs during decommissioning since Spent Fuel Pool can be isolated from existing cooling systems

**Contact: integrated-systems@framatome.com
www.framatome.com**

It is prohibited to reproduce the present publication in its entirety or partially in whatever form without prior written consent. Legal action may be taken against any infringer and/or any person breaching the aforementioned prohibitions.

Subject to change without notice, errors excepted. Illustrations may differ from the original. The statements and information contained in this publication are for advertising purposes only and do not constitute an offer of contract. They shall neither be construed as a guarantee of quality or durability, nor as warranties of merchantability or fitness for a particular purpose. All statements, even those pertaining to future events, are based on information available to us at the date of publication. Only the terms of individual contracts shall be authoritative for type, scope and characteristics of our products and services.