22ND INTERNATIONAL CONFERENCE ON RF SUPERCONDUCTIVITY
September 21-26, 2025

Contribution ID: **267** Contribution code: **MOP51** Type: **Poster Presentation**

HPR development for SSR cavities for RAON

Monday 22 September 2025 14:30 (3 hours)

High-Pressure Rinsing (HPR) is one of the most important processes in achieving high performance of SRF cavities. The geometry of SSR cavities differs significantly from that of HWR and QWR cavities. For upgrading the HPR process for SSR cavities, it is important to understand how much of the inner surface area can be effectively reached by the waterjet from an HPR nozzle. HPR simulation software was developed to evaluate waterjet coverage based on parameters such as nozzle hole orientation, rotation speed, and translation speed of the nozzle rod. Prototype nozzles were fabricated for SSR1 and SSR2 cavities to improve rinsing performance. Testing of SSR1 and SSR2 cavities using these new nozzles is currently underway at IRIS. The nozzle design is being optimized based on simulation and experimental results.

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Yes

Footnotes

Funding Agency

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Session Classification: Monday Poster Session

Track Classification: MC3: Cavities