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SSR1 and SSR2 cryomodules for the heavy ion accelerator RAON

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The driver linac of the heavy ion accelerator called RAON will be built in Korea and it utilizes four types of superconducting cavities.

The SCL1 (Superconducting Linac 1) consists of the QWR (Quarter Wave Resonator, $\beta=0.047$, 81.25 MHz) cavities and dedicated cryomodules each hosting one cavity. Furthermore, the HWR (Half Wave Regenerator, $\beta=0.21$, 162.5 MHz) cavities and cryomodules hosting two and four cavities.

The SCL2 (Superconducting Linac 2) consists of the SSR1 (Single Spoke Resonator1, $\beta=0.3$, 325 MHz) and the SSR2 ($\beta=0.51$, 325 MHz) cavities and the dedicated cryomodules host three and six cavities, respectively.

The manufacturing of the prototypes of the SSR1 and SSR2 cryomodules is on-going and the current status is reported. The issues included are the estimation of the thermal load, the P&ID of the cryomodules, as well as the results of the thermal and structural designs of the cryomodule's components such as the two phase pipe, support posts and flow pipes.

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