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Progress on the development and construction of the 50 kW Neutron Converter for Spiral 2 project

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LNL-INFN is in charge of the research, development and construction of the 50 kW neutron converter for the Spiral 2 facility for producing radioactive ion beams. In the Spiral 2 project, the deuterons primary beam 40 MeV and 5 mA interacts with a graphite converter for producing a neutron flux of 1x1012 neutrons/s/cm2. The high neutron flux is required for inducing fissions on the UCx fissile target that leads to reach high fission rates and high intensity of the radioactive ion beams. The design of the converter is based on a graphite rotating wheel, that allows the dissipation of the total power of the primary beam, avoiding complex cooling systems. The design had been conceived in such a way to house also the 200 kW converter. A brief summary of the recent developments and state of art on the construction will be presented.

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