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Elettra 2.0: Magnet Power Converters strategy

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Elettra 2.0 is the Project finalized to upgrade the Storage Ring (SR) and part of the beamlines (BLs) of Elettra. The machine optics requires a significant number of magnets and additional coils to energize individually. More than 1200 DC power converters (PCs) are foreseen. A synergic design of the magnets and the associated PCs led to a great standardization: four current ranges (300 A, 100 A, 20 A, 5 A) and, consequently only four different types of PCs.

While the 20 V/300 A PCs (72 units) have been ordered on the market with a “built-to-specification” procedure, the 15 V/100 A and the 10 V/20 A units (together account to about 1000 units) are an in-house design and their procurement will follow a “built-to-print” procedure. The 15 V/5 A type (not less than 250 units) is still under design and will follow the same approach of the 100 A and 20 A ones.

This paper gives an overview on the magnet power converter system, the results of the tests on the prototypes and the installation strategy.

Funding Agency

Footnotes

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Yes

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