

Title (en)
MAGNETIC-FIELD GENERATING DEVICE FOR A PARTICLE ACCELERATING SYSTEM

Publication
EP 0193038 B1 19890517 (DE)

Application
EP 86101853 A 19860213

Priority
DE 3506562 A 19850225

Abstract (en)
[origin: US4734653A] A magnetic field apparatus for a particle accelerator having a particle track having curved sections contains several magnetic field-generating windings, and at least one supplemental winding provided for focusing the electrically charged particles. The system does not require pre-accelerators and relatively large particle streams should be capable of being accelerated nevertheless to relatively high energy levels. In the region of at least one of the curved sections of the particle track, an azimuthal guiding field for the particles is generated by the supplemental winding during the acceleration phase. This supplemental winding is designed as an appropriately curved electric conductor arrangement which in part encloses the particle track and which is designed in the manner of a hollow channel open toward the outside. The conductor arrangement is appropriately structured for suppressing eddy currents and carries a current transversely to the particle track.

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G21K 1/08; H01F 7/20; H05H 7/04

IPC 8 full level
G21K 1/08 (2006.01); **G21K 1/093** (2006.01); **H01F 7/20** (2006.01); **H05H 7/04** (2006.01); **H05H 13/04** (2006.01); **H05H 13/10** (2006.01)

CPC (source: EP US)
G21K 1/093 (2013.01 - EP US); **H01F 7/202** (2013.01 - EP US); **H05H 7/04** (2013.01 - EP US)

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