

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

Publication
EP 0193837 A3 19861203 (DE)

Application
EP 86102393 A 19860224

Priority
DE 3508334 A 19850308

Abstract (en)
[origin: US4710722A] Magnetic field-generating apparatus for an installation for accelerating electrically charged particles, the particle track of which comprises curved and straight sections, contains main magnetic field generating windings and at least one supplemental winding which is provided for focusing the particles on the particle track. It should be possible to accelerate relatively large particle streams to relatively high energy levels without the need for separate preaccelerators. In the region of at least one of the curved sections of the particle track the supplemental winding is designed as a conductor arrangement forming a quadrupole triplet for focusing the particles during their acceleration phase, the turns of the supplemental winding being arranged on both sides of the plane in which the particle track lies. In particular, a conductor arrangement forming a quadrupole triplet can be provided in both regions of the curved sections of the particle track wherein these conductor arrangements together form a double-telescope system for focusing the particles.

IPC 1-7
H05H 7/04; **G21K 1/093**

IPC 8 full level
G21K 1/093 (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); **H05H 7/04** (2013.01 - EP US)

Citation (search report)
• [A] DE 2045978 A1 19710325 - SCIENCE RES COUNCIL
• [A] IEEE TRANSACTIONS ON NUCLEAR SCIENCE, Band NS-30, Nr. 4, Teil 1, August 1983, Seiten 2120-2122, IEEE, New York, US; B. FRAN CZAK et al.: "A variable transition energy lattice for SIS 12/18"
• [A] IEEE TRANSACTIONS ON MAGNETICS, Band MAG-19, Nr. 3, Teil II, Mai 1983, Seiten 1348-1352, IEEE, New York, US; J. ALLINGER et al.: "High field superconducting window-frame beam transport magnets"
• [A] IEEE TRANSACTIONS ON NUCLEAR SCIENCE, Band NS-24, Nr. 3, Juni 1977, Seiten 1296-1298, IEEE, New York, US; W.B. SAMPSON et al.: "Isabelle quadrupoles"
• [AD] NUCLEAR INSTRUMENTS AND METHODS, Band 121, 1974, Seiten 525-532, North-Holland, Amsterdam, NL; F. HINTERBERGER et al.: "The VICKSI beam handling system"

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Designated contracting state (EPC)
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EP 0193837 A2 19860910; **EP 0193837 A3 19861203**; **EP 0193837 B1 19900502**; DE 3670943 D1 19900607; JP H0754760 B2 19950607; JP S61208800 A 19860917; US 4710722 A 19871201

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