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(54) Title (EN): LIGHTWEIGHT ASYMMETRIC MAGNET ARRAYS WITH THETA MAGNET RINGS

(54) Title (FR): RÉSEAUX D'AIMANTS ASYMÉTRIQUES LÉGERS À ANNEAUX MAGNÉTIQUES THÊTA

(57) Abstract:

(EN): A magnet array (700) includes multiple magnet rings (711-720) and a frame. The multiple magnet rings are positioned along a longitudinal axis and coaxially with the longitudinal axis, wherein at least one (712, 713, 719) of the magnet rings possesses rotational symmetry and has both a finite component of magnetization along an azimuthal (θ) coordinate, and a finite magnetization in a longitudinal-radial plane. The multiple magnet rings configured to jointly generate a magnetic field along a direction parallel to the longitudinal axis. The frame is configured to fixedly hold the multiple magnet rings in place.

(FR): Cette invention concerne un réseau d'aimants (700) comprenant de multiples anneaux magnétiques (711-720) et un cadre. Les multiples anneaux magnétiques sont positionnés le long d'un axe longitudinal et de manière coaxiale par rapport à l'axe longitudinal, au moins un (712, 713, 719) des anneaux magnétiques possédant une symétrie de rotation et ayant à la fois une composante finie de magnétisation le long d'une coordonnée azimutale (θ), et une magnétisation finie dans un plan longitudinal-radial. Les multiples anneaux magnétiques sont configurés pour générer conjointement un champ magnétique le long d'une direction parallèle à l'axe longitudinal. Le cadre est configuré pour retenir fixement en place les multiples anneaux magnétiques.

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