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100

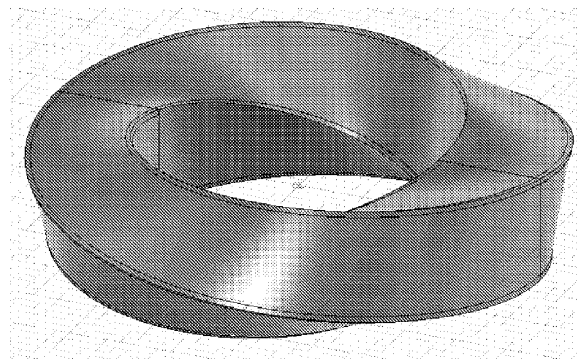


Figure 1

(57) Abstract: The present invention relates to a magnetic toroid (100) characterized by a Möbius-like toroid twisted by a degree, wherein the cross section of the Möbius-like toroid is a closed shape with at least four straight sides, wherein each side of the Möbius-like toroid is orthogonally magnetized to form the magnetic toroid (100), thereby creating a magnetic field having rotating polarity around the magnetic toroid (100) when the magnetic toroid (100) is spinning on its axis. The present invention also relates to a magnetically actuated rotary coupling device (200) comprising a first magnetic toroid (101) and a second magnetic toroid (102) being disposed adjacent to the first magnetic toroid (101), wherein the first magnetic toroid (101) is rotatable on its own axis relative to motion of the second magnetic toroid (102) when portions of their respective magnetic fields interact with each other.

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