

TITLE OF THE INVENTION**MAGNETIC-GEARED MOTOR WITH IRONLESS WINDING****5 ABSTRACT OF THE DISCLOSURE**

A magnetic-g geared motor (100) with ironless winding is disclosed. The magnetic-g geared motor comprises: (a) a pair of bearings (40) rotatably mounted to support the geared motor (100); (b) an inner array consisting of a flange (30) , an inner core (32) which is made from a plurality of pole piece (321), a coil or motor windings (34) and an inner rotor magnet (36), wherein the inner core (32) as well as the pole pieces (321), the coil (34) and the inner rotor magnet (36) are cylindrical in shape, and the inner core (32) including the pole pieces (321) contains the coil (34), and the coil (34) surrounds the inner rotor magnet (36); and (c) an outer array consisting of an outer rotor housing (10), an outer core laminations (12) and a plurality of bar magnets (14), wherein the outer rotor housing (10), the outer core laminations (12) and the bar magnets (14) are in a cylindrical shape, and the outer rotor housing (10) holds the outer core lamination (12) and the outer core lamination (12) holds the bar magnet (14), thereby the outer array encloses the inner array, and an inner shaft (361) which is formed as an extension of the inner rotor magnet (36), an output shaft (461) is mounted to one end of the shaft (361), thereby forming a magnetic-g geared motor (100).

(FIG. 1)