

Abstract

An inner magnetic transducer with multiple magnetic gaps and multiple coils, and a preparation method thereof. The inner magnetic transducer with multiple magnetic gaps and multiple coils includes a non-magnetic material frame and a non-magnetic material bearer frame. The inner magnetic transducer with multiple magnetic gaps and multiple coils includes two or more coaxial annular magnetic gaps with the same diameter value, two suits of symmetric magnetic paths, and a symmetric coil. In the transducer, enwinding direction, connection mode and parameters of coils are decided, in order to ensure that the value of the inductance of coils and the opposing electromotive force obtained during the process of moving to and fro are counteracted by each other. The inner magnetic transducer with multiple magnetic gaps and multiple coils has resistance load character or approximately has a resistance load character, simultaneously, has high sensitivity, high analytic capability, and high fidelity.