

SPIRAL CT SYSTEM AND RECONSTRUCTION METHOD

ABSTRACT

The present disclosure discloses a spiral CT system and a reconstruction method thereof. In some embodiments, it is proposed that data missing due to a large pitch is compensated by weighting the complementary projection data of the projection data obtained using the spiral CT system. After the data is complemented, the projection data is rebinned as cone parallel beam data, cone-angle cosine weighting and one-dimensional filtering are implemented on the rebinned data, and parallel beam back projection is finally implemented on the filtered data, to obtain the reconstructed images. In some embodiments, with the above method, the speed of the belt can be increased by more than one time in a case that the existing area of the detectors and the existing speed of the slip ring are unchanged, thereby improving the pass rate of the luggage and maintaining the quality of the reconstructed images unchanged.

Fig. 6