

Inspections for a superconducting rotating-gantry

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A superconducting rotating-gantry for carbon ion radiotherapy had first patient in May 2017, the number of therapeutic irradiations in a day is almost 20shot recently. This gantry using superconducting magnets can transport heavy ions having 430 MeV/u to the isocenter. The length and maximum radius are 14 m and 6.5 m, and the total weight of the rotating structure is approximately order of 300 tons. Meanwhile, unexpected problems have arisen as a result of iteration rotations, which was no need to consider in fixed irradiation port operation. Although we have only a few times for maintenance owing to usage for irradiation, we have to make inspections and take measures deal with these problems repeatedly. Then we treat efficiency and precision improvement of inspection as issue. We report failures occurred in the gantry and inspections for recurrence prevention.

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