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Survey and Alignment of the Heavy Ion Medical Machine

This article mainly described a method of measured the Heavy Ion Medical Machine in WuWei .We have installed and aligned most magnets of Heavy Ion Medical Machine by laser tracker and its fitting software SA. we set up a global Fram to determine the theoretical position of origin of each subsystem for whole Medical Machine . A local Frame which based on theoretical origin was set up for each subsystem, by which we aligned all devices in it. A part Frame was used for every device.8 benchmarks were welded on each magnet, aording to the device's theoretical coordinates in the local frame, we have calculated relational translating parameters and translated current frame to the part frame. Thus we can real-time watch the difference of actual and theoretical 3 dimension's coordinates of benchmarks. The accuracy of adjusting magnets has been reached 0.1mm by using this method.

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