

A Precise 6-Axis Girder System with Cam Mover Mechanism

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A precise girder system based on the cam mover mechanism was design and fabricated at NSRRC as a prototype for the future 3 GeV Taiwan Photon Source (TPS). In this system, a girder was supported with 6 cam movers on 3 pedestals to realize 6-axis kinematic mounting adjustability and also more stability. By introducing positioning sensors between consecutive girders, a whole auto-tuning girders (72 girders) system would be expected in TPS. The design consideration, simulation and test results of the prototype system would be described in this paper.