

Design and Construction of Models of Sun Tracker or Sun Tracking System for Light Transmission

Authors : Mohsen Azarmjoo, Yasaman Azarmjoo, Zahra Alikhani Koopaei

Abstract : This article introduces devices that can transfer sunlight to buildings that do not have access to direct sunlight during the day. The transmission and reflection of sunlight are done through the movement of movable mirrors. The focus of this article is on two models of sun tracker systems designed and built by the Macad team. In fact, this article will reveal the distinction between the two Macad devices and the previously built competitor device. What distinguishes the devices built by the Macad team from the competitor's device is the different mode of operation and the difference in the location of the sensors. Given that the devices have the same results, the Macad team has tried to reduce the defects of the competitor's device as much as possible. The special feature of the second type of device built by the Macad team has enabled buildings with different construction positions to use sun tracking systems. This article will also discuss diagrams of the path of sunlight transmission and more details of the device. It is worth mentioning that fixed mirrors are also placed next to the main devices. So that the light shining on the first device is reflected to these mirrors, this light is guided within the light receiver space and is transferred to the different parts around by steel sheets built in the light receiver space, and finally, these spaces benefit from sunlight.

Keywords : design, construction, mechatronic device, sun tracker system, sun tracker, sunlight

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