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A Study on Cleaning Mirror Technology with Reduced Water Consumption in a Solar Thermal Power Plant

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Abstract : In our study, traditional cleaning mirror technology with reduced consumption of water in solar thermal power plants is investigated. In developed countries, a significant increase of growth and innovation in solar thermal power sector is evident since over the last decade. These power plants required higher water consumption, however, there are some complications to construct and operate such power plants under severe drought-inflicted areas like deserts where high water-deficit can be seen but sufficient solar energy is available. Designing new experimental equipments is the most important advantage of this study. These equipments can estimate various types of measurements at the mean time. In this study, Glasses were placed for 10 and 20 days at certain positions to deposit dusts on glass surface by using a common method. Dust deposited on glass surface was washed by experimental equipment and measured dust deposition on each glass. After that, experimental results were analyzed and concluded.

Keywords : concentrated solar power (CSP) plant, high-pressure water, test equipment of clean mirror, cleaning technology of glass and mirror
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