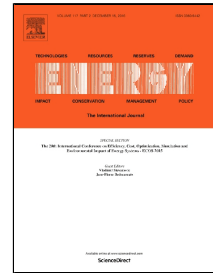


# Accepted Manuscript

Numerical Analysis of the Influence of Spherical Turbulence Generators on Heat Transfer Enhancement of Flat Plate Solar Air Heater

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Highlights:

- Spherical turbulators used create intense turbulent mixing in the vicinity of absorber
- Nusselt number peaks on the upstream surface of spherical turbulators
- Peak thermal efficiency occurs at lower pitch and higher diameter conditions
- Higher diameter and lower pitch values also impose greater pumping power penalty
- Diameter and pitch of spherical turbulator strongly influence the effective efficiency

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