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عنوان مقاله:

Performance of Closed Cylindrical Parabolic Trough Collector for Solar Thermal Application

محل انتشار:

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نویسنده:

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خلاصه مقاله:

A Cylindrical parabolic trough (CPT) collector of aperture width 1.03 m and length of 1.82m was designed and fabricated. CPT was covered with glass of thickness of 3 mm to avoid convective heat loss. Reflector coated with polished aluminum sheet having reflectivity 0.87 and receiver tube madeof mild steelcoated with black zinc having absorptivity of 0.94 were used for CPT. mass flow rate of working fluid was 4 l/h. Thermal performance of CPT collector was tested according to ASHRAEStandardmethods. Average instantaneous efficiency of closed cylindrical parabolic trough collector system was found to be 66% .The overall efficiency of CPT system is 71% which is best .suited for solar thermal applications

کلمات کلیدی:

,Cylindrical parabolic trough,thermal efficiency,solar thermal application

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