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The radiative conductive transfer equation in cylinder geometry:  
Semi-analytical solution and a point analysis of convergence

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**Highlights**

- The radiative conductive transfer equation in cylinder geometry was solved for a solid cylinder.
- The solution was obtained for the SN approximation in a semi-analytical fashion.
- Consistency and stable convergence of the recursive solution are discussed.
- The parameter dependence on convergence was analysed.
- Numerical results were compared to results in the literature and novel results were obtained.

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