

## Thermohydraulic Performance Comparison of Artificially Roughened Rectangular Channels

**Authors :** Narender Singh Thakur, Sunil Chamoli

**Abstract :** The use of roughness geometry in the rectangular channel duct is an effective technique to enhance the rate of heat transfer to the working fluid. The present research concentrates on the performance comparison of a rectangular channel with different roughness geometry of the test plate. The performance enhancement is compared by considering the statistical correlations developed by the various investigators for Nusselt number and friction factor. Among all the investigated geometries multiple v-shaped rib roughened rectangular channel found thermo hydraulically better than other investigated geometries under similar current and operating conditions.

**Keywords :** nusselt number, friction factor, thermohydraulic, performance parameter