

## **Use of chilton-colburn analogy to estimate effective plume chimney height of a forced draft, air-cooled heat exchanger**

### **Abstract**

An estimation of the effective plume-chimney height above a forced draft, air-cooled heat exchanger operating under natural convection has been carried out by employing Chilton-Colburn and Reynolds analogies of natural convection heat transfer on a flat plate to calculate the differential pressure in driving entrained air from the surrounding air. The results show that the Chilton-Colburn analogy performs closely with the Nusselt number-Equivalence method previously used by Chu [1] and renders support for its applicability.