Abdelhafid Boussouf University Center – Mila



Institute of Science & Technology

Process Engineering – E2 Heat Transfer

Academic year: 2024-2025 Instructor: Dr. Mohamed BOUTI

First name:	Last name:
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Homework n°01

Exercise

The bottom of a pan is made of a **4-mm-thick aluminium** layer. In order to increase the rate of heat transfer through the bottom of the pan, someone proposes a design for the bottom that consists of a **3-mm-thick copper layer sandwiched between two 2-mm-thick aluminium layers**.

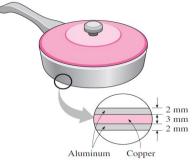


Figure 01

Will the new design **conduct** heat better? Explain.

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 $\begin{aligned} k_{copper} &= 398 \ W/m.K \\ k_{aluminium} &= 237 \ W/m.K \end{aligned}$
