



## Mechanical Design of Heat Exchangers: And Pressure Vessel Components (Softcover reprint of the original 1st ed. 1984)

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By Krishna Pratap Singh, Alan I. Soler

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Paperback. Book Condition: new. BRAND NEW, Mechanical Design of Heat Exchangers: And Pressure Vessel Components (Softcover reprint of the original 1st ed. 1984), Krishna Pratap Singh, Alan I. Soler, A tubular heat exchanger exemplifies many aspects of the challenge in designing a pressure vessel. High or very low operating pressures and temperatures, combined with sharp temperature gradients, and large differences in the stiffnesses of adjoining parts, are amongst the legion of conditions that behoove the attention of the heat exchanger designer. Pitfalls in mechanical design may lead to a variety of operational problems, such as tube-to-tubesheet joint failure, flanged joint leakage, weld cracks, tube buckling, and flow induced vibration. Internal failures, such as pass partition bowing or weld rip-out, pass partition gasket rib blow-out, and impingement actuated tube end erosion are no less menacing. Designing to avoid such operational perils requires a thorough grounding in several disciplines of mechanics, and a broad understanding of the inter- relationship between the thermal and mechanical performance of heat exchangers. Yet, while there are a number of excellent books on heat exchanger thermal design, comparable effort in mechanical design has been non-existent. This apparent void...



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