Record Nr. UNINA9910366597403321 Autore Saha Sujoy Kumar **Titolo** Performance Evaluation Criteria in Heat Transfer Enhancement / / by Sujoy Kumar Saha, Hrishiraj Ranjan, Madhu Sruthi Emani, Anand Kumar Bharti Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 3-030-20758-7 **ISBN** Edizione [1st ed. 2020.] 1 online resource (IX, 111 p. 103 illus., 23 illus. in color.) Descrizione fisica Collana SpringerBriefs in Thermal Engineering and Applied Science, , 2193-2549 Disciplina 621.4021 Soggetti Thermodynamics Heat engineering Heat - Transmission Mass transfer Mechanics, Applied Solids Materials - Analysis Fluid mechanics Engineering Thermodynamics, Heat and Mass Transfer Solid Mechanics Characterization and Analytical Technique **Engineering Fluid Dynamics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Chapter 1. Introduction -- Chapter 2. Single Phase Flow Performance Nota di contenuto Evaluation Criteria -- Chapter 3. Performance Evaluation Criteria based on Laws of Thermodynamics -- Chapter 4. PEC for Two-Phase Flow --Chapter 5. Conclusions. This Brief deals with Performance Evaluation Criteria (PEC) for heat Sommario/riassunto exchangers, single phase flow, objective function and constraints,

algebraic formulation, constant flow rate, fixed flow area, thermal resistance, heat exchanger effectiveness, relations for St and f, finned

tube banks, variations of PEC, reduced exchanger flow rate, exergy based PEC, PEC for two-phase heat exchangers, work consuming, work producing and heat actuated systems. The authors explain Performance Criteria of Enhanced Heat Transfer Surfaces—the ratio of enhanced performance to the basic performance—and its importance for Heat Transfer Enhancement and efficient thermal management in devices.