1. Record Nr. UNINA9910337470203321

Autore	Taler Dawid
Titolo	Numerical Modelling and Experimental Testing of Heat Exchangers / / by Dawid Taler
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-319-91128-7
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XVIII, 588 p. 192 illus., 89 illus. in color.)
Collana	Studies in Systems, Decision and Control, , 2198-4182 ; ; 161
Disciplina	519
Soggetti	Applied mathematics Engineering mathematics Thermodynamics Heat engineering Heat - Transmission Mass transfer Fluid mechanics Fluids Mathematical and Computational Engineering Engineering Thermodynamics, Heat and Mass Transfer Engineering Fluid Dynamics Fluid- and Aerodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Mass, momentum and energy conservation equations -- Laminar flow of fluids in ducts -- Turbulent fluid flow -- Analogies between the heat and the momentum transfer -- Developed turbulent fluid flow in ducts with a circular cross-section -- Basics of the heat exchanger modelling -- Engineering methods for thermal calculations of heat exchangers -- Mathematical models of heat exchangers -- Mathematical modelling of tube cross-flow heat exchangers operating in steady-state conditions -- Assessment of the indirect measurement uncertainty -- Experimental testing of heat exchangers -- Determination of the local and the mean heat transfer coefficient on the

inner surface of a single tube and finding experimental correlations -- Determination of mean heat transfer coefficients using the Wilson method -- Determination of correlations for the heat transfer coefficient on the air side assuming a known heat transfer coefficient on the tube inner surface -- Parallel determination of correlations for heat transfer coefficients on the air and water sides -- Determination of correlations for the heat transfer coefficient on the air side by means of CFD simulations -- Automatic control of the liquid temperature at the car radiator outlet -- Final comments.

Sommario/riassunto

This book presents new methods of numerical modelling of tube heat exchangers, which can be used to perform design and operation calculations of exchangers characterized by a complex flow system. It also proposes new heat transfer correlations for laminar, transition and turbulent flows. A large part of the book is devoted to experimental testing of heat exchangers, and methods for assessing the indirect measurement uncertainty are presented. Further, it describes a new method for parallel determination of the Nusselt number correlations on both sides of the tube walls based on the nonlinear least squares method and presents the application of computational fluid dynamic (CFD) modeling to determine the air-side Nusselt number correlations. Lastly, it develops a control system based on the mathematical model of the car radiator and compares this with the digital proportional-integral-derivative (PID) controller. The book is intended for students, academics and researchers, as well as for designers and manufacturers of heat exchangers.

2. Record Nr. UNIORUON00203916

Autore	Dutton, Brian
Titolo	La "Vida de San Millan de la Cogolla" de Gonzalo de Berceo / (estudio y edición crítica) Brian Dutton
Pubbl/distr/stampa	London, : Tamesis Books Limited, c1967. XIV, 256 p., [3] c. di tav. ; 24 cm.
Soggetti	Berceo Gonzalo De
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

3. Record Nr. UNINA9911010518503321

Autore	Berg Clara van den
Titolo	Civic Refugee Support
Pubbl/distr/stampa	transcript Verlag, 2025
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia