

1. Record Nr.	UNINA9910826314603321
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Titolo	Developments in turbomachinery flow : forward curved centrifugal fan / / Nader Montazerin, Ghashem Akbari, Moastafa Madmoodi
Pubbl/distr/stampa	Amsterdam, [Netherlands] : , : Woodhead Publishing, , 2015 ©2015
ISBN	1-78242-193-9 1-78242-192-0
Descrizione fisica	1 online resource (155 p.)
Collana	Woodhead Publishing in Mechanical Engineering
Disciplina	621.406
Soggetti	Turbomachines - Fluid dynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Front Cover; Related titles; Developments in Turbomachinery Flow: Forward Curved Centrifugal Fans; Copyright; Dedication; Contents; List of figures; List of tables; About the authors; Preface; 1 - General introduction of forward-curved squirrel-cage fan; 1.1 Introduction; 1.2 Fan geometry; 1.3 Flow field; 1.4 Fan performance and noise measurements; 1.5 Fluid-flow simulation in centrifugal fans; 1.6 Velocity measurement techniques and their considerations; 1.7 Final remarks; Further reading; 2 - Inlet configuration; 2.1 Why the inlet is important?; 2.2 Bell-mouth inlet; 2.3 Outward inlet 2.4 Final remarksFurther reading; 3 - Rotor; 3.1 Half-cone rotors; 3.2 Lean angle in rotor blades; Further reading; 4 - Volute; 4.1 Volute flow; 4.2 Slip factor; 4.3 Volute optimization; 4.4 Volute width; 4.5 Double- outlet volute; 4.6 Final remarks; Further reading; 5 - Noise in forward- curved centrifugal fans; 5.1 Sound parameters; 5.2 Different types of noise; 5.3 Modelling of sound generation in fans; 5.4 Effect of fan components on sound generation; 5.5 Sound generation of double- outlet squirrel-cage fans; 5.6 Final remarks; Further reading 6 - Contribution of jet-wake-volute interactions to flow characteristics and turbulence models6.1 Role of nonintrusive measurements on examination of complicated turbulent flows; 6.2 Jet-wake interactions with the volute flow; 6.3 Geometrical characteristics of tensorial-flow

quantities; 6.4 Challenges in turbulence modelling; 6.5 Final remarks; References; Index

Sommario/riassunto

Developments in Turbomachinery Flow: Forward Curved Centrifugal Fans explores the forward curved squirrel cage fan as an excellent instrument for fluid mechanics research in turbomachines. The book explores phenomena such as jet/wake interaction, circulation, separation and noise in turbomachines, also addressing the characteristics that are specific to this fan and applications in other centrifugal turbomachines. Chapters begin with a general introduction that includes research techniques and a survey of older research, and then proceed into a detailed description of improvements for d
