

<<Quantized Vortices i>>

图书基本信息

书名：<<Quantized Vortices in Helium II氦的量子漩涡 II>>

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内容概要

This book discusses the properties of quantized vortex lines in superfluid helium-4 in the light of research on vortices in modern fluid mechanics , and gives the first comprehensive treatment of the problem. The author begins with a review of the knowledge of classical fluid dynamics which is relevant to the main topics of the book.

This is followed by a presentation of basic material on helium II and quantized vortices.

The following chapters deal with various different aspects of the subject , and the book concludes with substantial introductions to two currently active topics , namely superfluid turbulence and the nucleation of quantized vortices.

Both quantum tunnelling and thermal activation nucleation processes are also discussed , including the Kosterlitz-Thouless transition in thin films.

The author's comprehensive approach will make this book invaluable for students taking advanced undergraduate or graduate courses , and for all those involved in research on classical and quantum vortices.

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