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Nota di contenuto	Introduction -- Part I Conventional Kolsky-Hopkinson bar machine -- Part II Specific Processing of the Kolsky-Hopkinson bar machine -- Extensions of the strain rate range and strain rate control -- Specific loadings of the Kolsky-Hopkinson bar machine -- Use of the Kolsky-Hopkinson bar machine to test specific materials and structures.
Sommario/riassunto	In this book, leading scientists share their vision on the Kolsky-Hopkinson bar technique, which is a well-established experimental technique widely used to characterize materials and structures under dynamic, impact and explosion loads. Indeed, the Kolsky-Hopkinson bar machine is not a simple experimental device. It is rather a philosophical approach to solve the problem of measuring impact events. The split Hopkinson pressure bar conventional device is mainly limited to test homogeneous ductile non-soft materials under uni-axial compression. Extending the use of this device to more versatile applications faces several challenges such as controlling the stress

state within the specimen and mastering the measurement of forces and velocities at the specimen-bar interfaces and then the material properties. Thus, the topics discussed in this book mainly focused on the loading and processing parts.
