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Sommario/riassunto	<p>This book discusses the manifold applications of several non-destructive methods to a few classes of materials. In particular, X-ray imaging techniques (both in the laboratory and at synchrotron radiation sources) as well Eddy current and magnetic methods are used in a few example materials (metals, concrete and others) to assess the quality of large components and these techniques' suitability as materials characterization tools. Advanced non-destructive evaluation techniques, such as neutron and synchrotron X-ray diffraction, only available at large-scale installations, are also shown to yield particularly relevant information about the residual stress of additively manufactured materials and components. Such large-scale techniques complement laboratory tools well in accessing all the scales of application from micro-level to conventional non-destructive techniques.</p>