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Descrizione fisica	1 online resource (XIII, 173 p. 151 illus., 132 illus. in color.)
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Nota di contenuto	Introduction -- Monitoring principle of welding process based on arc emission spectrum -- Experimental setup made of welding and spectral acquisition subsystems -- Prediction of welding status based on features extracted from the whole arc spectrum -- Prediction of welding status based on features extracted from spectral lines of interest -- The control of welding quality based on spectral features -- Summary and conclusions.
Sommario/riassunto	This book presents the recent research results of the application of arc spectrum in the welding process. It sheds light on the fundamentals of monitoring welding quality using arc spectral information. By analyzing the topic both from a global and local perspective, it establishes a knowledge base of features characterizing welding statuses. Researchers, scientists and engineers in the field of intelligent welding can benefit from the book. As such, this book provides valuable knowledge, useful methods, and practical algorithms that are applicable in real-time detection of welding defects.