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Nota di contenuto	; 1. Introduction -- ; 2. Spray forming of metals -- ; 2.1. The spray forming process -- ; 2.2. Division of spray forming into subprocesses -- ; 3. Modelling within chemical and process technologies -- ; 4. Fluid disintegration -- ; 4.1. Melt flow in tundish and nozzle -- ; 4.2. The gas flow field near the nozzle -- ; 4.3. Jet disintegration -- ; 5. Spray -- ; 5.1. Particle movement and cooling -- ; 5.2. Internal spray flow field -- ; 5.3. Spray-chamber flow -- ; 5.4. Droplet and particle collisions -- ; 6. Compaction -- ; 6.1. Droplet impact and compaction -- ; 6.2. Geometric modelling -- ; 6.3. Billet cooling -- ; 6.4. Material properties -- ; 7. An integral modeling approach -- ; 8. Summary and outlook.
Sommario/riassunto	Spray forming combines the metallurgical processes of metal casting and powder metallurgy to fabricate metal products with enhanced

properties. This book provides an introduction to the various modelling and simulation techniques employed in spray forming, and shows how they are applied in process analysis and development. The author begins by deriving and describing the main models. He then presents their application in the simulation of the key features of spray forming. Wherever possible he discusses theoretical results with reference to experimental data. Building on the features of metal spray forming, he also derives common characteristic modelling features that may be useful in the simulation of related spray processes. The book is aimed at researchers and engineers working in process technology, chemical engineering and materials science.
