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Autore	Allemeersch Paul
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Nota di contenuto	Front matter -- Preface -- Contents -- 1. Introduction to the Slurry Loop Process -- 2. The Loop Reactor Circulation Pump Power -- 3. The Functioning of the Settling Legs -- 4. The Settling of the Polymer in the Settling Legs -- 5. Catalyst Activity and Productivity -- 6. The 1/1 Hypothesis -- 7. Catalyst Residence Time Distribution -- 8. Catalyst Activity Profiles from Full Scale Loop Data -- 9. Conversions of the Reactants -- 10. The Ethylene Concentration Profile in the Loop Reactor -- 11. A Simple Model for the Slurry Loop Reactor -- 12. Establishing Correlations from Loop Reactor Data by Linear Regression -- 13. Scaling-Up from Bench Reactor to Loop Reactor -- 14. The Operation of Two Loop Reactors in Series -- Index
Sommario/riassunto	This book presents all information necessary to understand the functioning of a slurry loop reactor for the polymerisation of ethylene into high density polyethylene, and to operate it accordingly. All discussions are based on experimental data from the operation of full scale commercial loop reactors. Methods for off-line modelling and scaling-up from lab to full scale are included, as well as the answers to important questions on the running of two loop reactors in series.

Building knowledge from full scale industrial experience. This highly accessible book makes one understand the functioning of slurry loop reactors for the polymerisation of ethylene, and how to operate them. Its methods include off-line modelling, scaling-up and running reactors in series. It is inspiring for all production and process engineers, showing, for the first time, how with full scale reactor data the link is made between firm basic theory and the most practical operating guidelines.