

Contents

1	Background	1
1.1	Pollution Problems of Pulp and Paper Industry	1
	References	4
2	Pulp and Paper Making Process	7
2.1	Pulp Making Process	7
2.2	Stock Preparation and Paper Making Process	9
	References	10
3	Pulp Bleaching and Bleaching Effluents	13
3.1	Pulp Bleaching	13
3.2	Bleaching Effluents	16
	References	18
4	Environmental Impact of Bleach Effluents	21
4.1	Environmental Fate and Effects	22
4.2	Environmental Issues	24
4.3	Environmental Regulations	26
	References	28
5	Strategies Used for Reducing the Generation of Pollutants	31
5.1	Pollution Reduction Through Process Modification	31
5.1.1	Nonconventional Pulping Technologies	31
5.1.2	Internal Process Modifications	34
5.2	External Treatment	40
5.2.1	Physico-Chemical Processes	40
5.2.2	Electrochemical Processes	43
5.2.3	Advanced Oxidation Treatment Technologies	43
5.2.4	Treatment with Enzymes	45
5.2.5	Treatment with Bacteria	47
5.2.6	Treatment with Fungi	58
	References	69

6 Conclusions and Future Perspectives 81

Glossary 83

Index. 85

<http://www.springer.com/978-3-319-00544-7>

Bleach Plant Effluents from the Pulp and Paper Industry

Bajpai, P.

2013, VIII, 88 p. 2 illus., Softcover

ISBN: 978-3-319-00544-7