

Title (en)
Procedure for the bleaching of pulp.

Title (de)
Verfahren zum Bleichen von Zellstoff.

Title (fr)
Procédé de blanchiment de pâte.

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Abstract (en)
The invention concerns a procedure for the bleaching of pulp using oxygen as an oxidating bleaching chemical. The essential features of the invention are that oxygen is used in the first oxidation stage of the bleaching process, that the pulp is subjected to enzyme treatment, and that after oxygen bleaching and enzyme treatment, the pulp is washed. According to the invention, the subsequent oxidation stages can be implemented using bleaching chemicals containing chlorine, e.g. chlorine gas and/or chlorine dioxide. The use of enzymes allows partial burning of the washings and enables the amounts of toxic compounds in the spent bleach liquor to be reduced, simultaneously lowering its chemical oxygen demand.

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Cited by
US6942754B2; US6824646B2; US7541175B1; US5935836A; US5837515A; US5487812A; EP1039020A1; US5434071A; US5591304A; US5231022A; US5314637A; US5318905A; US5785811A; AU647891B2; US5871730A; GB2248075A; GB2248075B; US7816129B2; US9096519B2; US9586883B2; US6300114B1; US6506593B2; US6667170B1; EP0487557B1

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