

Title (en)  
Process for producing satinated paper

Title (de)  
Verfahren zur Erzeugung von satiniertem Papier

Title (fr)  
Procede pour la preparation de papier satine

Publication  
**EP 1239074 A1 20020911 (DE)**

Application  
**EP 01105754 A 20010308**

Priority  
EP 01105754 A 20010308

Abstract (en)  
To produce a super-calendered paper, the pulp (S) is prepared (1) for a papermaking machine (2) to deliver a dry web for a polishing press (3) which polishes the web surfaces between surfaces which are pressed together. At the pulp preparation stage, the fiber suspension is processed at a grinder (5) to give the pulp a consistency of 2-8% and preferably 3-5%. The grinding intensity is set to give the required pulp character for subsequent web polishing, and is increased if the surface polishing is insufficient. To produce a polished super-calendered paper web, the pulp grinding intensity is adjusted by its specific grindability or the every second grinding edge lengths without altering the proportional specific grindability so that it remains constant. The grinding action takes place in a refiner, and the every second grinding edge length variation is set by altering the rotary speed. The blade clothing in the refiner is at a cutting angle of maximum 15 degrees . During grinding, the every second edge loading is at least 1000 Ws/km or at least 2000 Ws/km. During grinding, a pure specific grindability of at least 100 kWh/t is transferred. The grinding action gives a ground degree of at least 70 degrees SR. The fiber suspension is composed of at least 80% used paper materials of used newspapers, magazines and waste office paper. The pulp preparation station has at least one ink separation and removal function. At the web polishing stage, a flat surface pressure is applied to the web of maximum 100 N/mm<2>, using a super calender. The process control uses the achieved web polish as a reference for adjustments to the pulp grinder. The surface pressures during the surface polishing are held so low, that a permissible black satinizing value is not breached, and the pulp grinding intensity is set high enough to give the required polish level. The low pressure level at the surface polishing stage ensures that the polished web has the required level of whiteness, and the pulp grinding intensity is increased until the desired web surface polish is achieved.

Abstract (de)  
Das Verfahren dient der Erzeugung von hochwertigem satinierten Papier und enthält die drei Verfahrensabschnitte Stoffaufbereitung (1), Papierbildung (2) und Satinageprozess (3). Erfindungsgemäß werden die bei der Durchführung des Verfahrens verwendeten Papierfasern einer speziellen Mahlung (5) unterzogen, bei der die Intensität der Mahlung auf die Neigung zur Schwarzsatinage im Satinageprozess (3) abgestimmt wird Diese Abstimmung kann mit Hilfe eines Prozessrechners vorgenommen werden. In Kombination mit dem Satinageprozess (3) wird dann ein Papier mit besonders guter Bedruckbarkeit erzeugt. <IMAGE>

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IPC 8 full level  
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Citation (search report)  
• [A] US 5914008 A 19990622 - WINHEIM STEFAN H [DE]  
• [A] US 5673616 A 19971007 - STOTZ WOLF GUNTER [DE], et al  
• [A] DE 19548865 A1 19970703 - KUESTERS EDUARD MASCHF [DE]  
• [A] US 6165317 A 20001226 - SABOURIN MARC J [US]  
• [A] US 4372810 A 19830208 - BYSTEDT HJALMAR S I [SE]  
• [A] WO 9954046 A1 19991028 - METSAE SERLA OYJ [FI], et al

Cited by  
EP2224057A1; EP2900868B1

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