
Paperbase Alerting Service Sample

Recycling and waste paper collection,
treatment and products

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PI: 20203899 JA: 0203

TI: Suzano innovates in the production of 100% recycled paper

AU: Anon

JN: Papel \$IS=

CI: vol. 62, no. 4, Apr. 2001, p. 55 (C, K, S)

CT: COMPANY INFORMATION/ NEW PRODUCT/ OFFSET PAPER/ RECYCLED PAPER/

CN: Suzano

AB: Suzano, one of Brazil's largest pulp and paper company's, has launched a line of recycled paper aimed at offset printing. The making of "Reciclato", as the new paper was branded, required BRL3m of investment and will require a further BRL1.5m in marketing. Although the recycled paper plant has a capacity to produce 30tpy it is only producing 5tpy initially. Suzano hopes that the success of Reciclato will grow and that Brazil will increase the percentage of paper recycling as it is still approximately 35%.

(Short article)

SO: B

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PI: 20203915 JA: 0203

TI: More competition: companies in the packaging sector lead the wastepaper segment in Chile

AU: Guedes Filho E

JN: Papel \$IS=

CI: vol. 62, no. 6, June 2001, pp 54-56pt; 60-61en (C, K, S)

CT: PACKAGE/ PACKAGING INDUSTRY/ PACKAGING WASTE/ RECYCLING/ WASTE PAPER/

AB: In Chile, large companies, such as CMPC control a large part of the waste paper sector, whereas in Brazil, this is an independent sector. CMPC began its involvement in paper recycling in the early 1980s when the Sociedade Recuperadora do Papel (Sorepa) was set up. This ensures a stable demand for wastepaper, with competitive prices and prevents large quantities of wastepaper becoming rubbish, as the company collects, buys, bales and transports the waste paper. Waste paper is also collected by 4,000 rubbish collectors organised into a Guild. The Tetra Pak group is investigating ways of reducing the environmental impact during the whole life cycle of the packaging. Two local companies, Comphania Papeleira do Pacifico (CPP) and Papeles Carrascal have conducted tests on recycling the packaging of Tetra Pak. There are problems with the lack of a selective collection of waste in Chile. International Paper has a partnership with Nestle under which a paperboard tray for yoghurt packaging was developed to replace a tray made of plastic. Voluntary projects have been established jointly by the Chilean government, government agencies and the packaging industry to create Clean Production Agreements. A three year project on the Minimisation of Residues from Bottling and Packaging is also underway with assistance from the German government.
SO: B

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PI: 20203979 JA: 0203

TI: Deinking process design: optimization according to ink detachment and removal

AU: Carre B; Vernac Y

CI: 54th ATIP Annual meeting "Water, energy, waste: issues of the paper industry", Grenoble, France, 9-11 Oct. 2001, session 9, 13pp <Paris, France: Association Technique de l'Industrie Papetiere, 2001, 461pp, 3 vols, FRF1000.00> (C)

CT: BRIGHTNESS/ CONFERENCE/ CONSISTENCY/ DEINKING/ DEPOSITION/ DISPERSING/ KNEADER PULPER/ MULTISTAGE PROCESS/ PRINTING INK/ RESIDUAL INK/ SEPARATION/

CN: ATIP

AB: Comparative studies were performed of ink detachment by kneading or dispersing at high consistency immediately following pulping. With woodfree pulps, the best results were achieved with high speed dispersion or a low speed kneader following peroxide bleaching when the temperature is below the softening temperature of the particles. For woodcontaining pulp, of the different conditions tested the high speed disperser was more efficient than the low speed kneader under conventional conditions. The results with the kneader could not be improved by either increasing the kneading time or the kneading energy. Dispersion after pulping and high consistency screening was also studied at consistencies from 3%-45%. Low consistency dispersion caused a 2% increase in brightness and a reduction in speck contamination. Thickening had little effect on ink detachment, but did reduce flotation efficiency and speck fragmentation. (10 fig, 1 tab, 5 ref)

SO: B

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PI: 20203986 JA: 0203

TI: Characterization of process water from recycling of wet strength papers

AU: Ilic G; Zule J; Moze A

JN: Papir \$IS=0350-6614

CI: vol. 29, no. 3-4, Sept. 2001, pp 64-68 (K)

CT: COLLOID/ PILOT TRIAL/ PROCESS WATER/ RECYCLING/ SULPHITE PULP/
WASTE PAPER/ WET STRENGTH AGENT/ WET STRENGTH PAPER/

AB: The contribution of polyamideamine-epichlorohydrin resin (PAE) and urea-formaldehyde (UF) wet strength agents from recycled papers to the content of dissolved and colloidal substances (DCS) in process waters. A series of paper samples from bleached sulphite pulp with different additions of PAE and UF resins was prepared. Model waters were collected after slushing of paper samples at standard experimental conditions and the types and concentrations of individual DCS were determined. A further series of samples from waste paper with different addition of PAE, sizing agent and 1% of cationic starch were prepared on a pilot plant. The prepared samples were slushed at standard experimental conditions and also with previous addition of sodium hydroxide and hydrogen peroxide. The content of DCS in model waters was determined and the results of analyses are presented. (6 fig, 5 tab, 12 ref)

SO: B

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PI: 20204087 JA: 0203

TI: Application of ligninolytic enzymes to modification of pulp fibers: effects of manganese peroxidase pre-treatment on deinking of newspaper and waste paper from office

AU: Tsuchikawa K; Kondo Ryuichiro; Sakai K

CI: 2001 (68th) Pulp and paper research conference, Tokyo, Japan, 18-19 June 2001, pp 6-11, <Tokyo, Japan: Japan TAPPI, 2001, 180pp> (P)

CT: CONFERENCE/ DEINKING/ FLOTATION/ MANGANESE PEROXIDASE/ OFFICE
WASTE PAPER/ OLD NEWSPAPER/ ONP/ OWP/ PRETREATMENT/ WASTE PAPER/

CN: Japan TAPPI

AB: A crude enzyme emitted from *Phanerochaete sordida* YK-624, was evaluated as a manganese peroxidase (MnP) pretreatment in the deinking of newspaper and office waste paper. When ME(MnP treatment-alkaline extraction) was used in the pretreatment of newspaper prior to flotation, the treated samples were cleaner after flotation than the untreated samples. Optimum results were achieved when using MEM(MnP treatment-alkaline extraction-MnP treatment) pretreatment. Residual soiling was 45% less than that of the untreated sample when deinking office waste paper using MEMP(MnP treatment-alkaline extraction-MnP treatment-peroxide bleaching) pretreatment. The physical strength of sheet paper produced from office waste paper was not reduced by use of any of the enzymatic pretreatments. (6 fig, 13 ref)

SO: B

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PI: 20204088 JA: 0203

TI: The link between the surface free energy of inks and the deinking performance of recycled papers

AU: Goto S; Miyanishi T

CI: 2001 (68th) Pulp and paper research conference, Tokyo, Japan, 18-19 June 2001, pp 12-15, <Tokyo, Japan: Japan TAPPI, 2001, 180pp> (P)

CT: CONFERENCE/ DEINKING/ FREE ENERGY/ INK PROPERTIES/ SURFACE ENERGY/ SURFACE TENSION/

CN: Japan TAPPI

AB: The Lifshitz-van der Waals, acid-base and total surface free energies of inkjet, offset newsprint, heat offset and toner inks were evaluated using contact angle measurements. With the principal ratio from the Lifshitz-van der Waals component, all the inks examined had low energy surfaces, of which the lowest surface energy was presented by toner ink and the highest by inkjet ink. As the surface tension of the deinking agents reduced, the contact angles of deinking agents on the inks decreased. Optimum ink separation from waste newspaper and copy paper is achieved when the surface tension of the deinking agent corresponds closely to the Lifshitz-van der Waals surface energy component of the ink. The study demonstrated the importance of monitoring surface energies for deinking. (4 fig, 2 tab, 3 ref)
SO: B

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PI: 20204119 JA: 0203

TI: Possibility of recycling utilization of sludge ash as paper filler

AU: Koshikawa M; Isogai A; Onabe F

CI: 2001 (68th) Pulp and paper research conference, Tokyo, Japan, 18-19 June 2001, pp 160-163, <Tokyo, Japan: Japan TAPPI, 2001, 180pp> (P)

CT: ASH/ CONFERENCE/ INORGANIC COMPOUND/ PAPER/ RECYCLING/ SAMPLE/ SLUDGE/ TEMPERATURE CONTROL/

CN: Japan TAPPI

AB: The viability of recycling of inorganic components in paper sludge to produce paper fillers was investigated. After analysis, the incinerated ash components in the waste centres were described as originating from waste paper fillers. Ash yield decreased as incineration temperature increased with plateau levels reaching 40% at 700-1,000 deg C, when paper sludge samples were incinerated for 1h. Using sludge ashes prepared from paper sludge samples incinerated at 800 deg C for 1h, handsheets were produced. The study confirmed that it should be viable to use paper sludge ashes as paper fillers by recycling as there was no significant difference in physical and optical properties of handsheets either containing sludge ash or prepared using calcium carbonate filler. (3 fig, 1 ref)

SO: B

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PI: 20204564 JA: 0203

TI: Corenso wants recycling technology to become an export product

AU: Ojanpera K

JN: Tek. Talous \$IS=0785-997X

CI: no. 39, 8 Nov. 2001, p. 4 (K)

CT: ENERGY RECOVERY/ LIQUID PACKAGING BOARD/ NEW PROCESS/ RECYCLING/

CN: Corenso

AB: Core boards and liquid boards specialist, Finnish Corenso United Oy, has developed a new recycling method for liquid boards. A recycling unit at Varkaus, Finland, in operation since the start of 2001 and built at the cost of FIM200m, is able to process and separate multilayer fibres from packaging materials and even utilise aluminium and plastics as energy. Recycling of aluminium foil is an entirely novel idea. About 7-8mt of multilayer boards are used in the world annually, about 3mt of which is board containing

aluminium foil. The unit at Varkaus has a processing capacity of 80,000-85,000tpy, over 50% of which is imported milk and juice cartons from abroad.
SO: B

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PI: 20204614 JA: 0203

TI: Recycling effects on multi-ply cartonboards properties using fibres from liquid cartonboard packages

AU: Neves F L; Mangolini Neves J

JN: Papel \$IS=

CI: vol. 62, no. 10, Oct. 2001, pp 93, 95-102 (C, K, S)

CT: BOARD PROPERTIES/ LIQUID PACKAGING BOARD/ MECHANICAL PROPERTIES/ MULTIPLY BOARD/ RECYCLED PULP/ RECYCLING/ REPULPING/

AB: A study was carried out to investigate the performance of multiply cartonboards made from recycled liquid packaging containers, especially those used for longlife milk. In order to recycle liquid packaging containers, the paper component which makes up 75% of the packaging, must be separated from the remaining materials, polyethylene and aluminium. The layering of cartonboards allow the production of a cartonboard where only the outer layer, which represents 37.5% of it, is made from bleached kraft pulp, while a brown inner layer can be made mostly from recycled liquid packaging containers. The proportion of recycled to virgin fibres must be adjusted to the intended use of the cartonboard, taking into account that the proportion of short fibres in the recycled material increases with each pulping cycle. Five types of multiply boards from 1-5 recycles were tested according to the standard tests available. (9 fig, 10 tab, 11 ref)
SO: B

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PI: 20204624 JA: 0203

TI: The use of chemical additives in deinking

AU: Renders A; Chauveheid E; Dionne P Y

JN: Celul. Pap. (Chile) \$IS=0716-2308

CI: vol. 15, no. 1, Mar. 1999, pp 3-14 (C, K, P, S)

CT: ALKALINITY/ BLEACHING/ BRIGHTNESS/ DEINKED PULP/ DEINKING/ DEINKING AGENT/ HYDROGEN PEROXIDE/ OXYGEN BLEACHING/ OZONE BLEACHING/ SODIUM SILICATE/ SURFACTANT/

AB: Oxidising agents are more environmentally friendly than reducing agents, which has resulted in a great increase in the use of hydrogen peroxide, oxygen and ozone in pulp bleaching. Other substances, such as additives and surfactants, are also utilised in the deinking and pulping of recycled newsprint. A laboratory study was carried out to investigate the role of various chemicals in the pulping of a mixture of magazines and newspapers, as well as mixed office waste paper. During the deinking stage, surfactants and caustic soda help to remove the recalcitrant ink particles from the fibres, whilst hydrogen peroxide is applied to optimise the alkalisation process and to achieve maximum brightness. Peroxide is also applied during the bleaching process of deinking pulp, either in conventional sinks or in bleaching towers. The optimisation of peroxide bleaching depends on keeping a number of factors under control, from limiting the presence of metallic ions to the proliferation of catalase producing microorganisms. (15 ref, 2 tab, 24 ref)

SO: B

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PI: 20204643 JA: 0203

TI: An internet-based technical support system for new deinking lines

AU: Pescantin M; Edwards L; Gu S

JN: Ind. Carta \$IS=0019-7548

CI: vol. 39, no. 7, Oct. 2001, pp 124-125; 127-128 (C, K, S)

CT: DATABASE/ DEINKING/ DEINKING MILL/ DESIGN/ INTERNET/ SIMULATION/

CN: Comer SpA

AB: A Web Site Process Data Base (Web PDB) has been developed to provide customer information during the various process design phases in the realisation of a new deinking line for tissue. Web PDB is useful for storing process quality data, allowing a comparison between the pilot plant data obtained for different types of furnish and real plant data. It also provides access to tables and engineering calculation tools for all engineering design phases and cost control. The Web PDB is the result of a cooperation project between Comer SpA and the University of Idaho. Security is a key concern and individual customers will use passwords to protect proprietary design data. Interactive Web site simulation can enhance the interaction between equipment manufacturers and customers during design, as well as provide ongoing, post design customer services, such as online process monitoring and data reconciliation. (10 fig, 3 ref)

SO: B

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PI: 20204705 JA: 0203

TI: Column flotation: a significant simplification of the flotation deinking process

AU: Dessureault S

JN: Prog. Pap. Recycling \$IS=1061-1452

CI: vol. 8, no. 1, Nov. 1998, pp 23-33 (C, K, P, S)

CT: AIR/ BRIGHTNESS/ BUBBLE/ COLUMN/ COST/ DEINKING/ DESIGN/ EFFICIENCY/ FLOTATION DEINKING/ FLOTATION MACHINE/ INJECTION/ OLD MAGAZINE/ OLD NEWSPAPER/ OMG/ ONP/ PILOT TRIAL/

CN: Kvaerner Pulping

AB: In a flotation column, feed pulp is admitted at two thirds of the column height and falls countercurrent to air bubbles generated at the base. Mill and pilot plant flotation column results were compared with conventional flotation technologies and hyperflotation using mixed office waste (MOW) and old newspapers/old magazines (ONP/OMG) furnishes. Pilot plant results are used to give a comparison of different flotation chemistries. The findings show that brightness gain and ink removal efficiency results obtained in a single stage with the flotation column were close to hyperflotation results, with low fibre loss and high ash selectivity. The flotation column operating costs and capital cost result in important savings, as well as simplification of the whole flotation process in deinking plants. (22 fig, 1 tab, 9 ref)

SO: B

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PI: 20204707 JA: 0203

TI: The effect of planetary mixing in repulping of photocopied papers

AU: Tremblay E

JN: Prog. Pap. Recycling \$IS=1061-1452

CI: vol. 8, no. 1, Nov. 1998, pp 45-53 (C, K, P, S)

CT: BRIGHTNESS/ CONSISTENCY/ DIRT/ FLOTATION DEINKING/ MIXING/ PAPER PROPERTIES/ PHOTOCOPY PAPER/ REPULPING/ TEMPERATURE/ TONER/ WASTE PAPER/

AB: The efficiency of planetary repulping was evaluated by determining the effects of repulping conditions on the toner fragmentation and separation from a photocopied furnish. The planetary pulper used was fitted with a single blade and had a volume of 3.5litre. Toner detachment and separation were found to be influenced by pulp consistency, initial and final slurry temperature and the duration of mixing during repulping. The mixing profile was effective enough to fragment toner particles, while maintaining a temperature gradient during repulping facilitated removal of the fragmented toner particles by flotation. Optimum repulping conditions were: initial repulping temperature 90 deg C, mixer blade speed of 575rpm, pulp consistency of 13%-15% under alkaline conditions, 30min of repulping time, and a final pulp slurry temperature of around 25 deg C attained after the first few minutes of repulping. Deinked fibre produced practically speck free handsheets of high brightness and the brightness of the formed sheet was comparable to that of virgin paper. (9 fig, 5 tab, 10 ref)

SO: B

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PI: 20204708 JA: 0203

TI: Semiannual patents review: January-June 1998

AU: Sykes M; Blankenburg J

JN: Prog. Pap. Recycling \$IS=1061-1452

CI: vol. 8, no. 1, Nov. 1998, pp 54-60 (C, K, P, S)

CT: ADHESIVE/ BIOTECHNOLOGY/ DEINKING/ DEINKING AGENT/ EFFLUENT TREATMENT/ PAPER CHEMICALS/ PATENT/ RECYCLING/ REVIEW/

AB: The patents summarised in this review in the area of paper recycling, appeared during the first half of 1998 in either Derwent World Patent Index or Claims/US Patents Abstracts. The abstracts presented provide a brief summary of the inventions, which cover a broad spectrum of recycling processes, equipment, and products made with recycled fibre. Some patents concern additives to adhesive and paper making materials that make adhesives easier to remove during recycling, while others address the environmental impact of deinking effluents and solid waste resulting from recycling. (43 ref)

SO: B

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PI: 20204709 JA: 0203

TI: A new OCC wax and hot melt measurement technique

AU: Rosenberger R; Moore W; Doshi M

JN: Prog. Pap. Recycling \$IS=1061-1452

CI: vol. 8, no. 1, Nov. 1998, pp 61-64 (C, K, P, S)

CT: CONTAMINANT/ CONTRAST/ HOT MELT ADHESIVE/ IMAGE ANALYSIS/ MEASUREMENT TECHNIQUE/ NEW PROCESS/ OCC/ OLD CORRUGATED CONTAINER/ WAX/

AB: A new measurement technique, the "RMD Wet Specimen Measurement Technique" has been developed to measure the concentration of wax and other contaminants in the old corrugated carton (OCC) process stream. Conventional handsheets produced from process samples are dried under controlled conditions that cause the waxy components to melt and flow into the interstices of the surrounding fibre matrix. When rewetted, the fibres, having no waxy coating, turn dark brown, while the areas containing wax components remain light brown and contrast with the surrounding dark brown wet fibres. A modified scanning technique is used to measure these light brown areas, providing a measure of the wax concentration in the handsheet. (6 fig)

SO: B

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PI: 20204710 JA: 0203

TI: Optimization of a stickies deposit testing procedure

AU: Doshi M

JN: Prog. Pap. Recycling \$IS=1061-1452

CI: vol. 8, no. 1, Nov. 1998, pp 65-68 (C, K, P, S)

CT: COLLECTION/ DEPOSIT/ QUANTITATIVE ANALYSIS/ STICKIES/ TEST METHOD/

AB: The measurement of stickies deposits was optimised using high density polyethylene (HDPE) as a stickies collecting material. Several parameters were evaluated to determine their effect on collection, including pulp consistency, temperature, stirrer speed, orientation of the hydrophobic collector within the pulp, stirrer speed, time, and additive. Important parameters were found to be stirring speed, duration of the test and temperature. Factors that were not significant included consistency, orientation of the collector to the pulp flow and addition of kerosene. Under the conditions of this study, both micro and macro stickies generated from the pressure sensitive and hot melt glues were captured on the HDPE collector. However, while there was good linear correlation between the quantity of sticky contamination in the pulp and the amount of material accumulated on the hydrophobic collector, standard deviation between samples was considerable. (1 fig, 6 tab, 2 ref)

SO: B

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PI: 20204711 JA: 0203

TI: What is the effect of pH and temperature on stickies tackiness?

AU: Dyer J

JN: Prog. Pap. Recycling \$IS=1061-1452

CI: vol. 8, no. 1, Nov. 1998, pp 69-74 (C, K, P, S)

CT: ADHESIVE/ CONTAMINANT/ DEPOSIT/ HOT MELT ADHESIVE/ PH/ STICKIES/ TACK/ TEMPERATURE/

AB: The characteristics which make adhesives useful in glues and labels also make them difficult to manage in the paper making system. This paper reviews results of studies into the effect of pH and temperature on stickies tackiness. The behaviour and size of stickies is a function of several interactions that occur during stock preparation. The behaviour is influenced by environmental factors, such as pH, temperature and bleaching and deinking chemicals. The control of stickies needs to take into consideration the factors which alter stickies tack and deformability. Several additives have been applied so that the severity of deposits on the paper machine is minimised, including

talca, zirconium compounds, cationic polymers, solvents and dispersants. An effective water clarification programme can ensure that dispersed/colloidal stickies do not accumulate in the water system and recontaminate the pulp. (6 tab, 13 ref)

SO: B

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PI: 20204761 JA: 0203

TI: Paper recycling from start to Finnish

AU: Krause T

JN: Resour. Recycling \$IS=0744-4710

CI: vol. 20, no. 12, Dec. 2001, pp 20-24 (P)

CT: RECYCLING SCHEME/ WASTE DISPOSAL/ WASTE PAPER/

CN: Corenso; Huhtamaki; Paperinkerays

AB: Trees cover three-quarters of Finland. Finnish forestry, a USD32bn industry, represents 21% of gross domestic product. The use of recycled paper balances environmental and economic factors and paper recycling is now part of the national culture. The collection rate of used paper was 67% in 2000. The Finnish company Huhtamaki has instigated design changes in its products to reduce raw material consumption and increase recyclability. The largest recovered paper merchant in Finland, Paperinkerays, is valued at USD40m. A coalition of interest is addressing recovery at sports and special events through the formation of the Garbage Gang. At the Tall Ships Race with 500,000 participants over four days 87% of disposed material was diverted from landfill. At Varkaus, the Corenso Group has commercialised a patented recycling process in which each element of multi-layer packaging can be reprocessed. The primary feedstock of some 94,000t for the 138,000tpy process comprises liquid packaging, wrappings, flexible packaging and other packaging composites. (1 fig, 2 tab)

SO: B

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PI: 20205114 JA: 0203

TI: Kamikon board made from shredded paper

AU: Anon

JN: Innovative New Packag. Jpn

CI: vol. 5, no. 11, Nov. 2001, p. 12 (P)

CT: BOARD/ NEW PRODUCT/ PAPERBOARD/ WASTE PAPER/

CN: Okabekamicon

AB: Okabekamicon has developed a process to make paperboard from shredded office paper waste, which won the Japan Star award at the Japan Packaging Contest 2000. Kamikon Board has a 2-3mm thickness and can be made up to 10mm thick. With a second process the product can be made into padding materials, dividers and insoles for shoes. Paper collection routes have been established via the Recycle Network, and Okabekamicon has established a recycling collection centre near its head office. The company has also introduced Hanikon, a foldable cushioning material for liquid crystal display (LCD) panels. (Short article)

SO: B

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PI: 20205115 JA: 0203

TI: Recycled corrugated paper turned into floor heater insulation

AU: Anon

JN: Innovative New Packag. Jpn

CI: vol. 5, no. 11, Nov. 2001, p. 12 (P)

CT: FLOOR/ HEATING/ INSULATION/ RECYCLED PAPER/ RESISTANCE/

CN: Fuji Kankyo System; Tonocore

AB: Fuji Kankyo System and paper cushioning panel maker Tonocore have jointly developed Nukumori, a floor heater insulation panel for residential buildings. Nukumori is made of recycled paper and has 200 times the resistance of normal paper to water passage. After 24h it has displayed no condensation, under conditions which cause condensation on glass wool in 1h. It has 10t/sq m compression strength. Selling price is JPY4000 for 50mm thickness. (Short article)

SO: B