

1) Family number: 11111090 (US6162511A)

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Title: METHOD OF COATING AND COMPOSITIONS FOR USE THEREIN

Abstract: PCT No. PCT/AU97/00307 Sec. 371 Date Nov. 19, 1998 Sec. 102(e) Date Nov. 19, 1998 PCT Filed May 20, 1997 PCT Pub. No. WO97/44140 PCT Pub. Date Nov. 27, 1997A method of preparing a coated substrate comprising: providing a radiation curable composition comprising a resin component including an unsaturated monomer and an unsaturated oligomer, binder or mixture of oligomer and binder; applying the radiation curable composition at a temperature in the range of from 35 to 150 DEG C. to the substrate; and subjecting the applied coating to radiation to thereby cure the coating. The invention also provides a composition for application of pigmented finishes and a method of coating in which a radiation curable composition is applied to a wet substrate.

Classifications:

International (IPC 8-9): B05D1/00 B05D3/06 B05D7/24 B05D7/26 C09D4/00 C09D4/06 (Advanced/Invention); B05D1/00 B05D3/06 B05D7/24 B05D7/26 C09D4/00 C09D4/06 (Core/Invention)

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European: B05D3/06C5E C09D4/06

US: 106/285 106/400 252/600 427/299 427/385.5 427/514 427/558 427/559 427/595

Family:

Publication number	Publication date	Application number	Application date
AU151896 A0	19960829	AU1996P001518	19960809
AU199727570 A1	19971209	AU19970027570	19970520
AU199852131 A1	19980319	AU19980052131	19980120
AU200163576 A1	20020221	AU20010063576	20010821
AU200163576 A5	20020221	AU20010063576D	20010821
AU222596 A0	19961003	AU1996P002225	19960910
AU293096 A0	19961107	AU1996P002930	19961014
AU529697 A0	19970320	AU1997P005296	19970226
AU550297 A0	19970327	AU1997P005502	19970307
AU691785 B2	19980521	AU19980052131	19980120
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EP0909222 A1	19990421	EP19970921524	19970520
EP0909222 A4	20040908	EP19970921524	19970520
US6162511 A	20001219	US19980180990	19981119
WO9744140 A1	19971127	WO1997AU00307	19970520

Priority:

AU1996PN09943	19960520	AU1996PN01518	19960809	AU1996P001518	19960809
AU1996PN02225	19960910	AU1996P002225	19960910	AU1996PN02930	19961014
AU1996P002930	19961014	AU1997PN05296	19970226	AU1997P005296	19970226
AU1997PN05502	19970307	AU1997P005502	19970307	AU19970027570	19970520
WO1997AU00307	19970520	AU19980052131	19980120	AU20010063576	20010821

Probable Assignee: BALLINA PTY LTD

Assignee(s): (std): BALLINA PTY LTD ; GARNETT J L ; GARNETT JOHN LYNDON ; MATTHEWS A D ; MATTHEWS ALLAN DARLEY

Assignee(s): MATTHEWS AD

Inventor(s): (std): GARNETT JOHN LYNDON ; MATTHEWS ALLAN DARLEY

Inventor(s): JOHN LYNDON GARNETT ; ALLAN DARLEY MATTHEWS

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; PHILLIPS ORMONDE FITZPATRICK

Designated states: AL AM AT AU AZ BA BB BE BF BG BR BY CA CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN YU

2) Family number: 15708545 (WO03022939A1)

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Title: SURFACE COATING COMPOSITION

Abstract: An aqueous acrylic resin coating composition containing iron oxide and especially suitable for application to fibre cement artefacts and masonry to form a surface coating having exceptional resistance to ultra violet light and water is essentially free from black iron oxide. Other metal compounds, including iron oxides such as red and yellow iron oxide may be selected for use in the composition, provided that they are all essentially free from black iron oxide either as an ingredient or as a contaminant.

Classifications:

International (IPC 8-9): C04B41/48 C04B41/63 C09D133/06 (Advanced/Invention);

C04B41/45 C04B41/60 C09D133/06 (Core/Invention)

International (IPC 1-7): C04B41/48 C09D133/06 C09D5/02

CPC: Y02W30/97 C04B41/009 C04B41/483 C04B41/63 C04B2111/00586 C04B2111/10 C04B2111/21 C09D133/06

European: C04B41/00V C04B41/48K C04B41/63 C09D133/06 M04B111/00T4 M04B111/10 M04B111/21

Family:

Publication number	Publication date	Application number	Application date
GB200121859 A0	20011031	GB20010021859	20010911
GB200219795 A0	20021002	GB20020019795	20020827
WO03022939 A1	20030320	WO2002GB04103	20020909

Priority:

GB20010021859 20010911 GB20020019795 20020827

Probable Assignee: HUNTING IND COATINGS LTD

Assignee(s): (std): HULTON STEPHEN ANDREW ; HUNTING IND COATINGS LTD

Assignee(s): HUNTING INDUSTRIAL COATINGS LIMITED ; HUNTING INDUSTRIAL COATINGS LTD

Inventor(s): (std): HULTON STEPHEN ANDREW

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR US

3) Family number: 19622210 (US1829187A)

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Title: METHOD OF MAKING COLORED COMPOSITION SLABS

Classifications:

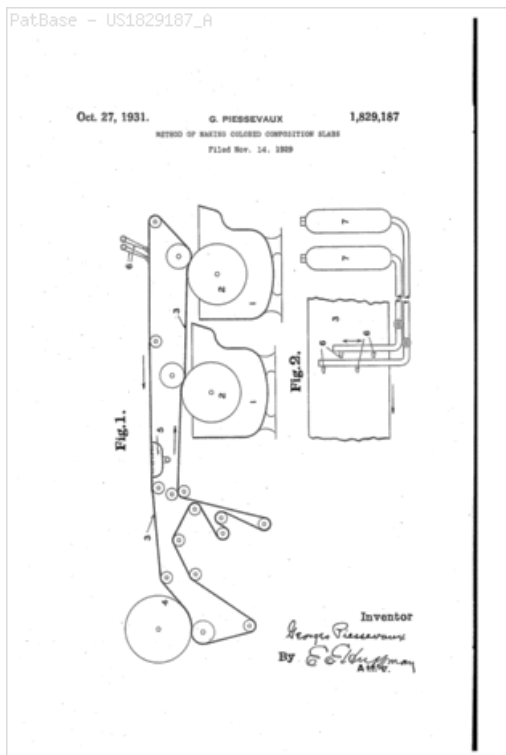
International (IPC 8-9): D21J1/00 (Advanced/Invention);
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International (IPC 1-7): B28B1/52

CPC: D21J1/00 B28B1/008 B28B1/527

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Family:

Publication number	Publication date	Application number	Application date
US1829187 A	19311027	US19290407028	19291114

Priority:

US19290407028 19291114

Probable Assignee: ETERNIT INC

Assignee(s): (std): ETERNIT INC

Inventor(s): (std): GEORGES PIESSEVAUX

Inventor(s): PIESSEVAUX GEORGES

4) Family number: 21256425 (US2097613A)

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Title: PROCESS AND APPARATUS FOR MAKING AND COLORING CEMENT FIBER AND THE LIKE PRODUCTS

Abstract: 1,929,301 and insofar as I claim it therein, I make no claim to it here. The dewatering units It is well understood that the strength of concrete bears a definite relation to the water-cement ratio of the mix. Obviously it is desirable to obtain as strong a final product as needful and possible, Hence it would appear to be desirable to adhere as closely as possible to a predetermined ratio for optimum strength. On the other hand strict adherence to this ratio is accompanied by the difficulty that the mix can not be handled mechanically with sufficient facility. Therefore an additional amount of water over and above that used to bring about the desired water-cement ratio, is used to give the requisite plasticity for fashioning the desired product. In the present case the plasticity must be such that the mix will flow on the distributor and can be laid on the conveyor belt in slats as hereinbefore described. Also, the additional amount of water will be quite considerable on account of the absorbent nature of the fibrous aggregate used in the mix. For convenience I will call the aforesaid additional amount of water, "surplus" water. I have used the word "dewatering" to describe one function of the units of the machine, which are now to be described, this function being the removal of a considerable portion of the surplus water from the layers. Other functions of the dewatering units are to compress the layers and to cause the concretion of the superposed discrete layers as they pass through certain of the units. The plastic mixture is carried along by the belt 262, from the distributing unit 21E to a dewatering unit 21G between the distributing units 210, 212. Similar dewatering units 21B, 229 are placed between the distributing units 21Z, 214 and between the unit 214 and the delivery end of the machine. Each dewatering unit comprises four pressure cylinders 230-233 located at the center of the unit; and two belt rolls or cylinders 236, 238 one at each end of the

unit; and four small cylinders or rollers 240 near the center of the unit. Q HU _ 2,097,613 _ 7 and above the presser cylinders. All these cylinders are parallel to one another and their axes are transverse to the machine, and all are supported at their ends by bearings carried by the frame of the machine. An endless 24 gauge wire mesh belt 231 is placed around the cylinders 230-233, 236, 230 and over two of the cylinders 200 and under the other two as shown in Figure 24. Directly beneath each of the presser cylinders 230-233 is one of the carrier belt supporting rollers 208 so that as the plastic sheet is conducted through the dewatering unit on the carrier belt 202 it will be pressed between four pairs of rollers, for example 230-208 form one pair. Rotating brushes 241 and 243 and streams of water keep the meshes of the belts 202, 231 open. I have found that the plastic layer may be more satisfactorily worked if the belt 231 is inclined slightly to the conveyor belt 202 by locating each of the cylinders 238, 233, 232, 231, 230 a little nearer the belt 202 than its predecessor. In this way the pressure on the layer is gradually applied and increased and a better product results. The bearings 23671, 2381_{gt}; of the cylinders 236, 238 are movable vertically upon the uprights 242 of the frame, with which the bearings are slidably engaged. To adjust the height of these bearings and hence of the cylinders, horizontal rods 244 have hand wheels 240 on them, and by a worm and pinion gearing these hand wheels can rotate vertical screw rods 248 engaging in screw threaded sleeves 249 formed integral with bearings 23611, 23Bh, and thus cause the bearings and sleeves 249 to ride up and down the rods 240. On opposite sides of the machine are pairs of parallel, horizontal, lengthwise-extending beams 250-250a, one above the other and secured together at their ends by a pair of vertical angle irons 251, thus forming a carriage for the cylinders 230-233 of the dewatering unit. Each pair of these beams is vertically adjustable at each end by the rotation of a fixedly located screw rod 252 engaging with a screw-threaded sleeve 253 on each beam. The rotation of these rods 252 may be accomplished by hand wheels 254 having worm pinion and worm gear connections with the screw rods. _ Suspended from the upper beam 250 and slidably engaged with the lower beam 250a are bearings 256a, b, c and d, for the cylinders 230-233, all of which are vertically adjustable relative to the beams 250-25 u., by means of screw threaded connecting rods connecting the beams and the bearings. As will hereinafter appear it is desirable to simultaneously adjust opposite ends of adjacent cylinders. Therefore, the upper ends of alternate connecting rods for example, the connecting rods for the cylinder 230, 232, are provided with worm wheels 260 which engage with worm gears 252 which are on a horizontal rod 264 extending lengthwise of the machine, that rod being rotatable by a hand wheel 266 through another worm gear and pinion connection 258. Upon the opposite side of the machine, a rod equivalent to rod 264, by mechanism similar to that just set forth, enables the adjustment of the ends, on that side of the machine, of cylinders 231, 233, and that rod as well as rod 264, is controlled by the hand wheel 266. Thus, hand wheel 266 causes simultaneous movement of opposite ends of adjacent cylinders. By reason of this adjustability of one end only of each cylinder a crowned sheet of plastic may be rolled out, that is to say, the sheet will taper off from the middle toward the edges. Fig. 25 shows the cylinders adjusted for a tapered sheet. All the rollers and cylinders are driven at constant speed by a motor through appropriate gearing, in such a way that all the belts and peripheries of the cylinders have the same speed. Thus as the layer of material is laid upon the belt by the first distributor 210D it is carried along at constant speed to the first dewatering unit 21E where it passes between the conveyor belt 202 and the dewatering belt 231 of the dewatering unit. As the layer passes beneath the cylinders 230-233 surplus water is pressed out of it through both the upper and lower belts. If the cylinders 230-233 are set as shown in Fig. then the layer of plastic will be crowned in the center. The single layer thus made may be carried on belt 202 to the pressure cylinders 210-212 but generally I prefer to make a product of a plurality of layers and in that case the following procedure is earned out. The first layer having been dewatered it is carried on by the conveyor belt beneath the second distributor 212. Here a second layer of plastic, is deposited on the conveyor belt 202 on the top of the first layer. Both layers are carried by the conveyor belt through the second dewatering unit which, it will be remembered, is exactly the same in construction as the first unit. In the second dewatering unit surplus water is pressed from the upper or second layer of plastic, the water passing off through the upper belt of the dewatering unit, since the lower layer of plastic is practically impervious to water. While passing through the second dewatering unit the two layers of plastic, which up to this point have been discrete, are conformed into a thicker layer, which is conveyed onward by the carrier belt 202, beneath the third distributor unit 214. Here another layer of plastic is laid on the belt on top of the thicker plastic layer. This new layer is dewatered and conformed with the thicker layer in the same manner as was the second layer. When a small amount of surplus water is used in the plastic the transverse strips deposited on the conveyor belt by the distributor will have less tendency to now together as soon as they fall on the belt. However these strips are flattened out and merged as they pass through the dewatering unit and there is complete union between adjacent strips so that it is impossible to tell where one strip ended and another began. Instead of laying the layers of plastic on the belt 202 by means of a distributor, such as 210D, the layers may be spread on the belt by the spreaders hereinbefore described; or still other means to accomplish the same purpose may be devised. However, if a distributing cylinder is used in connection with the hopper 210I-I the width of the sheets may be varied, or a thick narrow layer may be laid down and pressed out in the dewatering units to the width of the belt or a lesser width, as desired. Thus the width of the layer may be regulated in a variety of ways to suit the desires of the manufacturer. - Treatment of the concrete sheet The sheet passing from the last dewatering unit is a concrete sheet to make up which one or more layers may have been used. The further treatment of this sheet is dependent on the product to be made. If load bearing articles are made the sheet may be cut into small units which afterward are compressed under great pressure in a hydraulic press, if non-load bearing products such as wall panel sheets, wall tile sheets and the like are made, further and greater compression of the continuous sheet may be accomplished before it is cut into the small, wall tile or wall panel sheets. For this purpose I provide a series of cylindrical pressure rollers 210-212 having bearings mounted in a carriage 214 like that carriage 250, 26011, 251 used for the dewatering unit cylinders 231J-233. The bearings of the rollers 216-212 are secured in the carriage 214 by four bolts, the ends of which abut the bearings at points spaced 90 degrees apart, whereby minor adjustment of the rollers 216-212 is made possible without changing the position of the carriage. The carriage 214 is vertically adjustable as a whole by mechanism exactly like that used for the adjustment of the dewatering unit carriages, hence it need not be described further. By means of this adjustability sheets of different thicknesses can be pressed, and the degree of pressure can be varied. As in the dewatering units so also in the compression unit, an endless belt 215 is passed around the rollers 210-212. This belt preferably is rubber, but may be polished steel or wire mesh if desired. This belt also passes around cylinder 216 which is located directly above the cylinder 206 and is of equal size thereto, and it also passes around a cylinder 211 which is vertically adjustable on vertical members of the frame 200, by bolts passing through slots in the vertical members. The slack of this belt 215 may be taken up by a guide roller 218 which is mounted on and vertically movable relative to the framework 200. As a matter of course certain of the supporting rollers 208 are located directly below the rollers 211-212, so that the compression of the continuous sheet may take place between them and the rollers 208. The same motor which drives the dewatering units, and rotates the distributors and causes movement of the dewatering and conveyor belts, may be used to drive the compression rollers 211J-212 through appropriate gearing. The actual construction and operation of all this gearing is a matter of mechanical skill and need not be described other than to say that the peripheral speed of all the belts and rollers in contact therewith are determined by, and are controlled so as to be the same as, the desired speed of the conveyor belt 202. Coloration The process and machine described here are particularly suited to the manufacture of colored products. The two usual ways of coloring products of the sort here concerned are to apply a coloring agent to the surface as a veneer or to mix it all through the plastic mass before it is pressed. The chief disadvantage of surface coloration is its lack of durability under the erosion of the weather when the product is used out of doors. The coloration by complete impregnation of the product with a coloring agent is durable but very expensive. In the present process, the coloring agent is added only to the body of mixed cementitious and fibrous ingredients which is formed into an outer layer of the initial mass and which becomes the outer thickness of the final concrete body. The coloration extends to a substantial depth, as distinguished from surface or veneer coloration, and is therefore as durable under weather erosion as a product colored throughout. It effects a saving of two thirds or more when the initial mass is three layered, as shown in the drawings, since the outer layer need not be as much as a third of the total thickness. So far as I am aware, there has never been known a product of this sort-i. e., one having cementitious and fibrous materials as its principal and characterizing ingredients-in which the coloring agent is present in the material and not merely on its surface, and to a depth sufficient to resist erosion by the weather yet not extending all the way through the product. Thus, the desirable qualities are present without entailing the cost of complete coloration. The present process and apparatus makes available and practicable certain coloring agents which generically may be described as those organic pigments or stable lake colors which may be combined with the plastic alkaline material forming the body of the products here concerned without chemical decomposition. These organic pigments are known and are extensively used. Before this time their cost and the lack of a practicable and economical way of adding them to the product have prevented their use in cementitious fibrous sheets for walls and roofing or for shingles. This invention makes it practicable to use these organic pigments alone or in conjunction with metal oxide pigments and thus to obtain more varied colors and mottled varicolored effects in each sheet or shingle. I have also found a material which, to my knowledge, heretofore has not been used for coloring products of this class and which, while being extremely inexpensive and readily procurable, is satisfactory for giving a red color to the products. It may be finely ground as usual and added to the initial mix in the same way as the finely ground oxide pigments are added, or it may be crushed only to a coarse size so that of the strip it when added to the outer layer will give a rough pebbled surface- thus enhancing

product. This the decorative qualities of the material is an impure red oxide of iron formed as a clinker residue in the manufacture of sulphuric acid from iron pyrites. In the manufacture of shingles by the machine first described it is possible to effect a greater saving in coloring material by taking advantage of the fact that only the exposed butt of the shingle need be colored. The spreader (which is delivering the outer layer) may be set for a narrow row width by swinging its gates inward toward the center. With a divider H0 in each spreader the machine will be forming two strips, tapered slightly if desired, from which two series of shingles may be cut. With the orifice of the last spreader narrowed, the colored mixture is delivered in a strip extending only over the inner parts of the previously delivered uncolored layers and therefore forms a butt having colored material to a substantial depth. The subsequent pressing between belts B and C removes the sharp line of demarcation between this top, partial layer and the other full width layers. In this way only one-sixth or less of the shingle contains the coloring agent, yet the result, for all practical purposes, is the same as if the whole shingle were colored. When one orifice is narrowed in this manner, it is desirable to reduce the volume of material fed to that spreader. This obviously may be done by reducing the volume of dry materials delivered from the well I I. The spiral conveyor in the well delivering to the last spreader may be provided with a drive for this purpose. The same result would be obtained by providing an individual drive for the screw conveyor 22 delivering to the last spreader so that its speed could be reduced. An equivalent saving can be made in the manufacture of shingles on the machine second described, because the distributor which is laying the outer layer may have the plastic mixture delivered to only its center portion by reason of the movable aids of the hopper being set for such delivery. The description above of coloration of the product by adding a coloring agent to the plastic mixture has reference to coloring agents such as metal oxide pigments or lamp black or other suitable color pigments. The number of colors obtainable in this manner is limited and each side of each strip is of a single color. - In Figures 17 and 18 are shown the means for adding the organic pigments which may be applied in a paste or in dry form or semi-liquid form. A number of inlet nipples 20 are provided in the upper surface of the last spreader. Inwardly opening check valves may be provided in these connections to prevent loss of the plastic mixture when pigments are not being added. The pigments with a cement to give a mixture are injected into the material in the spreader and, in passing through the spreader orifice and between the belts, each body of pigment is spread somewhat giving a region of color. The nipples are so spaced that, if all are used, the regions of color are close together or even may merge. The pigment is sufficiently deep in the sheet to withstand weather erosion but no inordinate amount of pigment is necessary. Different colors may be used to give a mottled effect. This mottled effect may be obtained where the outer layer is given a solid color by adding a pigment to the whole mixture forming that layer and then injecting a pigment at spaced points to form local color regions in the solid color. It is possible also to use metallic pigments in this manner in varicolored combination or along with lake pigments of various colors. The layer into which the pigments, either the metallic oxide or the lake pigments, are injected may be an uncolored layer or it may have an initial solid color by reason of the admixture with it of a pigment while in the mixer M. In the preferred machine shown in Figures 22- beside the coloration of one layer it is possible to produce a mottled effect by making one layer very wet, either with or without color being added to it, and then superposing another layer of another color and concreting these layers. For example the mixture of plastic in the first layer may be made very wet so that a measurable amount of surplus water remains in it after it has passed through the first dewatering unit. No color will be added to this layer. Then the second layer, with color mixed in it, may be laid on. In passing through the second dewatering unit the two layers are concreted and the sheet emerges with a mottled appearance. Alternatively the first layer may be colored with a color different from the second to give a different mottled effect. - The products - The product therefore may be described generally as being of strip form, i. e., having considerably greater lateral extent than thickness, made up principally of fibrous material bound together by cementitious material and comprising concreted layers which may or may not be of identical composition. Further, having reference to the colored product, at least one of the concreted layers contains a coloring agent throughout or, as an alternative, it contains local regions having a coloring agent present, the colors being either the same in all regions or different, as desired, and the local color regions existing either in an uncolored layer or in a layer having a coloring agent throughout. There is also the product in which only a portion of a layer is colored throughout, as for instance, the butt or that portion of the outer layer of a shingle which would be exposed on a building. - More specifically, there is the product having a colored roughened surface, by reason of the presence in an outer layer of a coarsely ground coloring agent, in particular, the impure red oxide of iron obtained as described above. In some cases, it will be possible to use the machines described herein to make a laminated product in which one or more layers have no cement but simply a vegetable fiber having sufficient gelatinous material to bind the fibers together when pressed. The machines will bind such a layer either to a cementitious layer or between cementitious layers, or it will make a board or mat of several layers of fibrous material containing a non-cementitious binding material, the layers in any case being concreted by the pressing operation. From the foregoing it will be apparent that many modifications within the scope of my invention may be made and therefore I do not limit myself to the embodiments shown. I claim:- 1. In combination, a bed plate having its upper surface longitudinally corrugated, an endless carrier belt adapted to travel over said surface and capable of assuming the contour thereof, means for forming a strip of plastic material on said belt as it passes over said bed plate, a second endless belt above said carrier belt and corrugated rollers with the second belt adapted to press said belt against the material on said carrier belt. 2. In combination, a bed plate having its upper surface longitudinally corrugated, an endless carrier belt adapted to travel over said surface and capable of assuming the contour thereof, a second belt above said first belt and means for giving its surface toward the carrier belt a contour conjugate with that of the bed plate surface, and means for forming a strip of plastic material on said carrier belt in advance of said upper belt whereby it may pass under said upper belt and be pressed. ~ 3. In combination, a mixing plant for making a number of mixtures of cementitious material and fibrous material, an endless carrier belt, a plurality of ducts for delivering said mixtures from said plant to said belt, each of said ducts having a spreader adapted to deliver a thin layer of material onto said belt, said spreaders being spaced along the belt whereby a strip of superposed layers is formed. 4. In combination, an endless carrier belt, a series of spreaders spaced along a portion of said belt to deliver material thereon in strip form, certain of said spreaders having a divider in the path of the material to divide the strip longitudinally. 5. In combination, an endless carrier belt, a series of spreaders spaced along a portion of said belt to deliver material thereon in strip form, certain of said spreaders having inlet openings in their upper wall whereby a coloring agent may be introduced into the material within the spreader. ~ 6. In combination, an endless carrier belt, a series of spreaders spaced along a portion of said belt to deliver material thereon in strip form, certain of said spreaders having means enabling the introduction of a coloring agent into the material within the spreader. 7. The process of manufacturing in strip form a product having fibrous material and cementitious material as its principal ingredients, which comprises forming a plurality of continuous superposed layers, each fabricated from a series of parallel slats, continuously advancing said layers, and subjecting said layers to pressure to remove surplus water and to concrete them. 8. The process of manufacturing in strip form B. product having fibrous material and cementitious material as its principal ingredients, which comprises forming a plurality of continuous superposed layers each fabricated from a series of parallel slats, continuously advancing said layers, and subjecting said layers in succession to pressure to remove surplus water and to concrete them. 9. The process of manufacturing in strip form a product having fibrous material and cementitious material as its principal ingredients, which comprises forming a plurality of continuous superposed layers, each layer being composed of a series of parallel slats, continuously advancing said layers while permitting said slats to draw together, and subjecting said layers to pressure to remove surplus water and to concrete them. 10. The process of manufacturing in strip form a product having fibrous material and cementitious material as its principal ingredients, which comprises forming B. plurality of continuous superposed layers, each layer being composed of a series of parallel slats, continuously advancing said layers while permitting said slats to draw together, and subjecting said layers to pressure to remove surplus water and to concrete them. ~ 11. The process of manufacturing in strip form a product having fibrous material and cementitious material as its principal ingredients, which comprises forming a layer composed of a succession of narrow slats, continuously advancing said layer while permitting said slats to draw together, subjecting said layer to pressure to remove surplus water, forming and solidifying one or more continuous layers in succession on the first mentioned layer, and pressing said superposed layers in turn to remove the surplus water and to simultaneously concrete the layers. ~ 12. In combination with an endless belt supported by a plurality of horizontal cylindrical rollers, a carriage, a plurality of cylindrical members supported by said carriage, one end of certain of said members being readily movable toward and away from said belt while the other ends of said members remain stationary, whereby a tapered sheet of plastic material may be pressed; 13. In combination with an endless belt supported by a plurality of horizontal cylindrical rollers, a carriage, a plurality of cylindrical members, supported by said carriage, opposite ends of certain of said members being readily movable toward and away from said belt while the other ends of said members remain stationary, whereby a tapered sheet of plastic material may be pressed. ~ 14. In combination with an endless belt supported by a plurality of horizontal cylindrical rollers, a carriage, a plurality of cylindrical members supported by said carriage, one end of certain of said members being readily movable toward and away from said belt while the other ends of said members remain stationary, said carriage being readily movable toward and away from said belt, whereby tapered sheets of plastic material of different thicknesses may be pressed. 15. In combination, an endless belt, means for mixing cementitious materials and fibrous materials, means to deliver said mixtures on said belt in layers, means to press said layers to remove surplus water and

concrete them, said means being adjustable whereby s, tapered sheet may be pressed. 16. In combination, an endless belt, means for mixing cementitious materials and Hb1'011S materials, means to deliver said Inlxtures on said belt in layers. means to press said layers to remove surplus water and concrete them, and means to incline said pressing means whereby a tapered sheet may be pressed. ' 17. In combination, an endless belt, means for mixing cementitious materials and Hbrous materials, means to deliver said mixtures on said belt in layers, means to press said _layers to remove surplus water and concrete them, and means to incline a portion pf-said pressing means in one direction and another portion in the opposite direction whereby sa, tapered sheet may be pressed. 18. The process of fanning a continuous strip of plastic material, comprising forming continuously a. pluxalitywoi parallel slats of plastic ma.- terlal, continuously advancing sa.id.slats in succession while subjecting them to pressure to unite them into a. strip. . 19. The process of depositing plastic material on a. moving belt comprising forming continuously a plurality of parallel slats of the material and laying them on the belt in succession. 20. The process of making a product In layers from plastic material, comprising forming a. series of slats of the plastic subjecting said slats to pressure to integrate them into a. layer, depositing another series of slats of plastic material on said layer, and subjecting the whole to pressure. 21. The process of making a. continuous multilayer unitary strip from plastic material, comprising forming a series of slats of plastic material, continuously advancing them while compressing them into a. concrete layer, forming' another series of slats and depositing them upon said layer, and compressing the Whole into a unitary strip while continuously advancing the same. 22. The process of producing a multi-layer product with a. mottled surface comprising forming a layer of plastic ma.ter1a.l containing' a large 'surplus of water, subjecting said layer to pressure, forming and superposing upon said iirsl; layer a. stiffer second; layer of plastic material of a. different color having a. small surplus of water, and subjecting both layers to pressure simultaneously to remove surplus water and concrete said layers. , 23. The process of producing s. multi-layer product with a mottled surface comprising forming a. layer of plastic material, forming and superPvstnz upon said mst layer a stlier second layer of plastic material of a different color, and subjecting both layers to pressure silnultaneously to remove the surplus water and concrete said layers, said first layefbeing of suflcient plasticity to permit the forcing through it of portions of I 1 I I. 'Il U said second layer, during the subjection of said layers to pressure, causing a mottled surface to be produced. V . 24. 'I'he process of producing a multi-layer product with a mottled surface comprising continuously forming and advancing a layer of plastic material containing a large surplus of water, subjecting said layer to pressure, continuously forming and superposing upon said ilrst layer a stiffer second layer ol' plastic materialof a dlifferent color having a small surplus of' water, and subjecting both layers to pressure simultaneously to remove the surplus water and concrete said layers. 25. The process of producing a ,multi-layer product with a mottled surface comprising continuously forming, and advancing a layer of plastic material, continuously forming and Superposing upon said nrst layer a stlner second layer of plastic material of a dlifferent color, and -subjecting both layers to pressure simultaneously to remove the surplus water and concrete said layers, said ilrst layer being of suilclent plastclity to permit the forcing through it of portions of said second layer, during the subjection of said layers to pressure, causing a mottled surface to be produced. _ _ 26, The process of producing a multi-layer product with a mottled surface, comprising depositing on a conveyor a series of transverse strips of plastic material containing a large surplus of water, subjecting said layer to pressure, forming and superpcsing upon said first layer a stlffer second layer of plastic materialof a different color having a small surplus of water, and subjecting both layers to pressure simultaneously to remove surplus water and concrete said layers. 27. The process of producing a multi-layer product with a mottled surface comprising depositing on a conveyor a series of transverse strips of plastic material containing a large surplus of water, forming and superposing on said first layer a stliller second layer of plastic material of a different color, and subjecting both layers to pressure silrnultaneously to remove the surplus water and concrete sald layers, sald ilrst layer being of suilclent plasticity to permit the forcing through it of portions of said second layer, during the subjection of said layers to pressure, caumng a mottled surface to be produced. 28. The process of producing a rnulti-layer product with a mottled surface comprising form- ing a layer ot plastic material containing a large surplus of water, subjecting said layer to pressure depositing upon said ilrst layer, a. series of transverse strips of stlffer plastic material having a. small surplus of water and being of a different color than said nrst layer, and subjecting both layers to prmsure simultaneously to remove sur- -plus water and concrete said layers. 29. The process of producing a multi-layer product with a mottled surface comprising forming a layer of plastic material, forming a second layer of plastic material, which is stlffer and of a dlifferent color than the ilrst layer, by depositing on said ilrst layer a series of transverse strips of said stlffer material and subjecting both layers to pressure simultaneously to remove the surplus water and concrete said layers, sald nrst layer being of sumclent plasticity to permit the forcing through It of portions of said second layer, during the subjection of said layers to pressure, 'causing a mottled surface to be produced. 30. The process of producing a ,multi-layer product with a mottled surface comprising continuously forming and advancing a layer of plastic material, continuously forming and superposlnz upon said HYSU layer a stlffer second layer of plastic material of a dlfferent color, by depositing a series of transverse strips of said stllier material, and subjecting both layers to pressure simultaneously to remove the surplus water and concrete said layers, said ilrst layer being of sumclent plasticity to permit the forcing through it of portions of said second layer, during the subjection of said layers to pressure, causing a mottled surface to be produced. 31. The process of producing a multi-layer product with a mottled surface comprising forming a layer by continuously depositing a series of transverse strips of plastic material upon 9. conveyor, continuously advancing said layer, continuously iorming and superposlnz upon said HYSU layer a stlffer second layer of plastic material of a dlfferent color, and subjecting both layers to pressure simultaneously _to remove the surplus water and concrete said layers, sald nrst layer being of sutlclent plasticity to permit the forcing through it of portions of said second layer. during the subjection oi said layers to pressure, causing a mottled surface to be produced

Classifications:

International (IPC 8-9): B28B1/52 B28B13/02

B28B5/02 (Advanced/Invention);

B28B1/52 B28B13/00 B28B5/00 (Core/Invention)

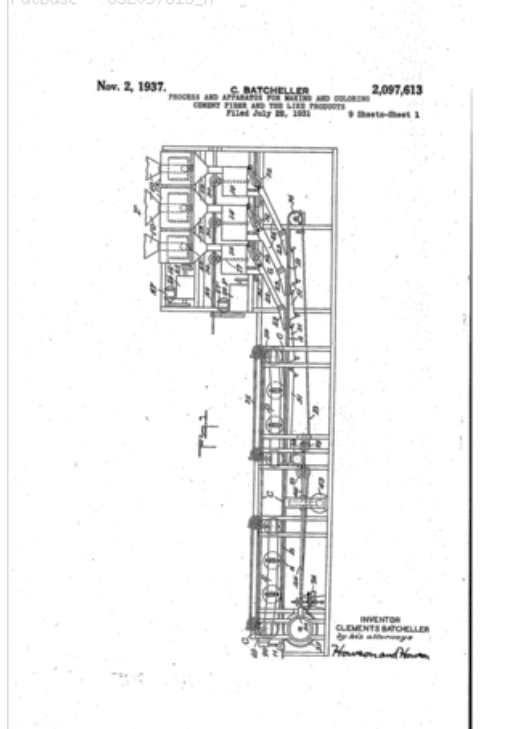
International (IPC 1-7): B28B1/52

CPC: B28B1/528 B28B5/027 B28B13/022

European: B28B1/52Z B28B13/02D2 B28B5/02C2

US: 264/172.19 425/224 425/324.1 425/370 425/84

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Family:

Publication number	Publication date	Application number	Application date
US2097613 A	19371102	US19310553818	19310728

Priority:

US19310553818 19310728

Probable Assignee:

BEMIS IND INC

Assignee(s): (std):

BEMIS IND INC

Inventor(s): (std):

CLEMENTS BATCHELLER

Inventor(s):

BATCHELLER CLEMENTS

5) Family number: 2287532 (EP0192627A1)

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Title: Coating for building materials and process for producing the constituents of this coating.

Abstract: Coating consisting of at least one undercoat intended to plug the pores of the substrate and to make the latter water-repellent, comprising an acrylic copolymer, a coalescing agent, a surface tension-modifying agent and water and of a finish coat with two components, the first comprising a hydroxylated polyacrylate resin, a delustring agent, a solvent and a surface tension-modifying agent, while the second component comprises an aliphatic polyisocyanate and a solvent.

Classifications:

International (IPC 8-9): C04B41/52 C08G18/62 E04F13/02 E04G23/00 (Advanced/Invention)

International (IPC 1-7): B05D5/00 B32B C04B41/48 E04B1/64 E04B1/92 E04F

CPC: C04B41/52 C08G18/6229 E04F13/02 E04G23/002

European: C04B41/52 C08G18/62G5D3 E04F13/02 E04G23/00B

Family:

Publication number	Publication date	Application number	Application date
BE901692 A	19850529	BE19850214483	19850208
DE3685132 D1	19920611	DE19863685132	19860207
EP0192627 A1	19860827	EP19860870016	19860207
EP0192627 B1	19920506	EP19860870016	19860207

Priority:

BE19850214483 19850208

BE19850901692 19850208

Probable Assignee: G LEVASSEUR SA SA

Assignee(s): (std): G LEVASSEUR SA SA ; G LEVASSEUR SOC ANONYME SA ; LEVASSEUR S AG ; LEVASSEUR S A G

Assignee(s): S A G LEVASSEUR SOCIETE ANONYME ; SAG LEVASSEUR SOC ANONYME ; LEVASSEUR G SA ; G LEVASSEUR S A ; G LEVASSEUR S A BRUESSEL BRUXELLES BE

Inventor(s): (std): LASCAR GEORGES GUY

Inventor(s): LASCAR GEORGES GUY B 8400 OOSTENDE BE

Designated states: CH DE FR GB IT LI LU NL

6) Family number: 34324055 (US2007062143A)

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Title: CONSTRUCTION PRODUCTS AND METHOD OF MAKING SAME

Abstract: A highly durable and easy to use prefabricated construction product is disclosed having a cellular concrete component sandwiched between two cement boards, wherein the cellular concrete component comprises cement, fly ash, an activating agent and water, and the cement boards comprise cement, fly ash, an activating agent, sand, silica fume, a water reducer agent, a reinforcing fiber, and water.

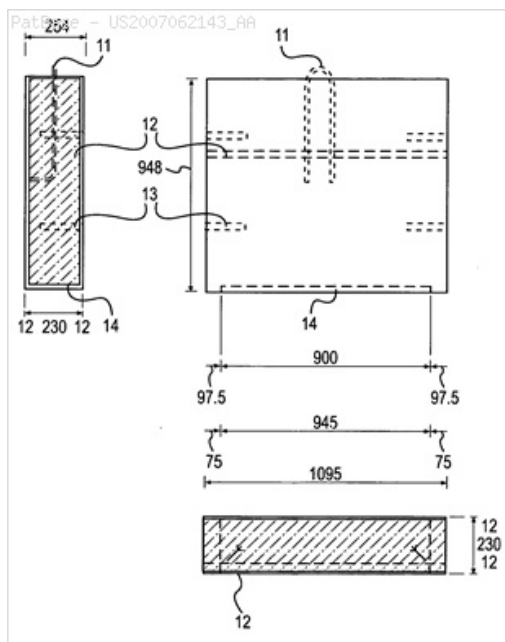
Classifications:

International (IPC 8-9): E04B2/00 (Advanced/Invention); E04B2/00 (Core/Invention)

CPC: Y02W30/92 Y02W30/94 E04C2/049 B32B3/12 B32B13/00 B32B13/02 B32B13/04 B32B2250/40 B32B2262/0253 B32B2262/101 B32B2264/104 B32B2264/105 B32B2266/0228 B32B2307/102 B32B2307/306 B32B2307/3065 B32B2307/554 B32B2307/712 B32B2307/7242 B32B2307/7265 B32B2419/04 B32B2419/06 B32B2607/00 C04B28/02 C04B2111/00586 C04B2111/00603 C04B2111/00612 C04B2111/0075 C04B2111/60 E04C2/521

European: B32B13/00 B32B13/02 B32B13/04 B32B3/12 C04B28/02 E04C2/04F E04C2/52A L32B250/40 L32B262/02H L32B262/10A L32B264/10F L32B264/10H L32B266/02B1B L32B307/102 L32B307/306 L32B307/306B L32B307/554 L32B307/712 L32B307/724B L32B307/726B L32B419/04 L32B419/06 L32B607/00 M04B111/00T26 M04B111/00T4 M04B111/00T5 M04B111/00T6 M04B111/60

US: 52/426 52/426P



Family:

Publication number	Publication date	Application number	Application date
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Priority:

US20050231506 20050921

Probable Assignee: NOUSHAD RAFIE L

Assignee(s): (std): NOUSHAD RAFIE L

Inventor(s): (std): NOUSHAD RAFIE L

Inventor(s): NOUSHAD RAFIE LOTFI ; NOUSHAD RAFIE

Agent(s): LAW OFFICES OF KHALILIAN SIRA LLC

7) Family number: 41736612 (WO08046803A1)

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Title: DECORATIVE WALL PANELS AND PROCESS FOR MANUFACTURING SUCH PANELS

Abstract: Colored cement bonded panels comprising a dried conventional coating made of one or more layers whereby at least one layer of the conventional coating contains at least one pigment, and a radiation cured coating composition applied on said dried conventional coating. The conventional coating comprises functional groups able to react with isocyanate groups. The radiation cured coating composition (i) comprises at least one radiation cured polymer A and at least one chemically crosslinked and radiation cured polymer B comprising isocyanate groups having reacted with functional groups, and (ii) has a surface gloss measured according to DIN 67530 equal or less than 20 percent at an angle of incidence of 85 degrees.

Classifications:

International (ipc 8-9): C04B41/45 C04B41/52 C04B41/60 C04B41/71 C08G18/00 C09D175/04 C09D175/16 C09D201/02 C09D5/00 E04F13/02 E04F13/14 (Advanced/Invention);

B01D C04B41/60 C09D175/04 C09D175/14 C09D201/02 C09D5/00 E04F13/14 (Core/Invention)

International (ipc 1-7): B01D C04B41/52 C04B41/71

IPC: C04B41/52 C04B41/009 C04B41/71 C04B2111/80

European: C04B41/00V C04B41/52 C04B41/71 M04B111/80

Family:

Publication number	Publication date	Application number	Application date
AR063309 AA	20090121	AR2007P104571	20071016
AT431322 E	20090515	AT20060122330T	20061016
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WO08046803 A1	20080424	WO2007EP60938	20071015

Priority:

EP20060122330 20061016 WO2007EP60938 20071015

Probable Assignee: REDCO NV

Assignee(s): (std): ETERNIT REDCO AG NV ; REDCO NV ; SCHNEIDER MICHAELA ; WOESTMANN PETER ; KALBSKOPF REINHARD ; SCHMIDT GERHARD ; SCHMIDT GERHARD R ; ETERNIT AKTSIENGEZEL SHAFT ; ETERNIT AG ; ETERNIT AG REDCO NV ; REDKO NV

Assignee(s): ETERNIT AKTIENGESELLSCHAFT ; ETERNIT AKTIENGESELLSCHAFT REDCO NV ; REDCO N V

Inventor(s): (std): WOSTMANN PETER ; WOESTMANN PETER ; W STMANN PETER ; VESTMANN PETER ; SHNAJDER MIKHAELL ; SHMIDT GERKHARD ; SCHNEIDER MICHAELA ; SCHMIDT GERHARD ; SCHMIDT GERHARD SCHNEIDER MICH ; REINHARD KALBSKOPF ; PETER WOESTMANN ; MICHAELA SCHNEIDER ; GERHARD SCHMIDT ; KALBSKOPF REINHARD ; KAL BSKOPF REJNKHARD

Inventor(s): SCHMIDT GERHARD SCHNEIDER MICHAELA WOSTMANN... ; KAL'BSKOPF REJNKHARD ; WAESTMANN PETER ; PETER WOSTMANN ; SCHMIDT GERHARD SCHNEIDER MICHAELA WOSTMANN PETER KALBSKOPF REINHARD

Agent(s): VILLASECA; LUZ CLEMENCIA DE PAEZ; CLAEYS PIERRE ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW