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SHEET 2 Of 3

FIG. 7
BACK-UP LAYER 33

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FIG. 8.
CORE BACK

FACE

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tates as shown. This mold-belt may be made of any suit- layer of urethane foam the reacting and volume ex-
able flexible material such as, "Dow Corning Silastic E panding foam is subjected to an auxiliary hot air blast
RTV Silicone Rubber." This mold-belt element-moves 17 in order to expedite the cure and improve the mold
by the various processing stations. It first passes by a detail pickup. The initial high density foam application
bank of heaters 2 where the mold temperature is raised 5 7A forms a layer. (x). This layer (x) expands only about
to about 120°F to about 160°F, preferably about 140°F, 15% to 20% of its original volume and does so almost
The barrier prime coat is applied, preferably by spray- immediately upon contact with the mold.
ing. This barrier coat may be any suitable material as The back-up or core layer Y from bank 7B is sprayed
for example, a Dow Corning 509 barrier Coat.- 15% simultaneously with a slight overlap of about one-
solid solution in methyl isobutyl ketone with a viscosity 10 fourth inch to 1 inch, such as about one-half inch. It is
of 50 centistokes. The coat is applied by spray with a obvious that the speed of the mold will determine the
line pressure of 20 psi. The thickness of the coating thickness of the respective layers for a uniform fixed
may be varied but preferably is about 0.0002 inch to rate of application from the sprayers. The cured foam
0.0005 inch dry film thickness, thickness of the combined layers is about 3 inches for
Trademark-DuPont Co. 15 the specific product described.
This barrier coat facilitates the removal of the fabri- Face layer X must be of sufficient "green strength"
cated structural element from the mold 1, and also when layer Y is applied so that its cell structure is not
functions as a prime and base color coat for the finish- destroyed by the secondary spray application. The
ing of the formed structural element or part. overlap of sprays 7A and 7B blends a small amount of
Immediately after the barrier prime coat is applied to 20 each foam material so that even though layer X has
the mold, a hot air blast is applied at 4 to speed its cure. "green strength" which would otherwise decrease a
The temperature of the hot air is in the range of about bond with subsequent applications, no line of demarca-
90°F to 150°F, such as about 125°F, Following the hot tion of layers exists. Thus there is no point or line of
air application at station 4, exhaust means S are applied structural part weakness due to inadequate bonds of
to draw off solvents that might impair the formation of 25 different layers of one with the other. Layer Y begins
the structural part in the mold which involves urethane to foam when applied and when unrestrained increases
foaming chemical reactions. At point or station 7 the its volume about 20 to 50 times, such as about 30 fold.
form is ready to receive the dual application of ure- As it begins to foam, the blast of hot air 17 is directed
thane foam which dual application will be hereinafter so that as the heat facilitates foam expansion, the air
more specifically described. 30 pressure holds or retards the foam expansion. The foam
The form or mold containing the expanding urethane therefore as it expands forces itself into the mold de.
foam passes under a molding belt surface 8 sthat a flat tails. The hot.air blast decreases in intensity so that it
back of the formed part is secured. This element how- is just strong enough to repress cell expansion within
ever is optional. Mold separating flanges 9 allow the the foam without rupturing the cells on their internal
molded part 11 to be removed from mold 1 and to be 35 pressure increases. The intensity of the blast of hot air
picked up by vacuum 13 action on conveyor 14 and as the molded foam leaves the blast is about 10% to
held in place for subsequent finishing operations. Air 40%, such as about.20% of the intensity of the blast
blast 10 helps dislodge part 11, which may be a small when the molded foam first contacts the blast.

individual part or a large continuous part. As the mold-belt continues to move, the applied, lay- Referring specifically to FIG. 2, an end view of one 40 ers leave the air blast 17 and the still foaming back
type of molded product is illustrated and also an end layer Y expands freely to its full height and cures. Due
view of the mold to make the same. The, formed ure- to the air blast and low viscosity of the layer Y as well
thane foam element 11 is molded on the face 15 of as its slow cure time as compared to X, more material

mold 1 between sides 16 of the mold as described. The collects in the lower part ofthe mold. Thus, more mate- skin 7’ is of relatively high density while the core 12 is 45 rial will rise and compensate for a low part of the mold.

of relatively low density. Thus, a self-regulating action occurs to produce a part
Referring to FIG. 3, continuous belt-mold 1 prefera- with a relatively flat back.
bly after being heated by heaters 2 as illustrated in Referring specifically to FIG. 4, the elements are sim-
FIGS. I and 4, moves under application spray station

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ilar to those described with respect to 3 except the bar- 3 of barrier prime coating. This, under certain condi- rier coat application has been eliminated. Instead, a
tions, may be omitted. Heat is applied by heaters 4 in plastic sheet of film 18 is introduced from holder 19.
order to facilitate the curing of this release coat, and The mold is replaced with a modified belt 20 drilled
fumes are exhausted by fan means 5. with small diameter holes (one-thirty-seconds inch), or
The dual foam applicator 7 consists of an initial bank 55 is made of an open celled or open weave material to
of nozzles 7A that apply the foam formulation that allow air to move through it but across its thickness
gives the relatively high density foam (layer X) and a only. As this mold moves, film holder 19 continuously
secondary bank of nozzles 76 for the application of a supplies material 18 down into the mold 1. As the mold
relatively low density backing or core (foam layer Y). moves on, It passes over a bed 30 that draws a vacuum
The foams are those as described in the above men- 60 through the mold and, pulls the film or sheet material
tioned literature art. downward against the mold surface and holds it there
The high density foam is preferably in the range from through spray foam application station 7 and releases

about 10 to 30 lbs/fl3, such as about 25 1bs/ft3, while the the vacuum when the foam is cured. This mold is auto- low density foam Is preferably in the range from about matically stripped and the film surfaced part moves on
2 to 4 lbs/ft3, such as about 3 lbs/ft3. The thickness of 65 to a cutter 21 or other subsequent sizing and packaging
the high density coat as applied is about one-sixteenth operations.
Inch to one-half inch, such as about one-fourth inch. FIG. 5 shows an adaption wherein an adhesive 22 is
Following the application of the back up low density applied to mold 1 to adhere aggregate 23. These mate-

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rials are introduced into the mold prior to applying the layer further enhances the flexural strength because, in dual foam at 7A and lB. Air and adhesive solvent blast the exterior zone where it is placed, the flexural stresses 23’ aids in the removal of loose unbonded aggregate are the greatest. In addition to the high strength charac- from the molded part while air blast 24 aids in drying teristics of the high density surface area low density the cleansed product face. 5 interior construction, decreased heat conductivity and, The method of decreasing the intensity of the hot air consequently, increased insulation properties are pro- blast 17 is shown in FIG. 6. The individual jets in the vided over conventional uniform high density urethane direction of movement of the mold are designed by any parts, due to the increase in internal gas bubbles or suitable means to secure a less intense blast or pressure cells without loss of surface impact resistance.
as designated by the length of the respective arrows, tO The various types of additives, fillers and/or reinforc- Referring specifically to FIGS. 7,8,9, 10 and 11, var- ing fibers which can be employed to produce a change bus structural molded elements are shown. FIG. 7 ii- in the physical properties of a resultant molded product lustrates a high density (small air cells) face layer 32 must be mixed with the plastic material in other pro- and low density back-up layer 33 part construction. cessing techniques at an early stage of raw material

FIG. 8 illustrates a three layer part construction 34, 35 15 mixing. With the present process, it is possible to add and 36 with each layer at a different density. In all in- these agents directly to the mold while the plastic mate-

terfaces of different density layers the lines of demarca- rial is still in a liquid state thereby obtaining a uniform
tion are eliminated since the materials are applied as dispersal of the material within the molten plastic. This
described so as to expand together and form a homoge- is done without employing additional mixing apparatus
neous part. By the present technique it is possible to 20 thereby maintaining a high degree of control, in the
change the thickness at any layer and the density of any molded product wherein the filler, reinforcing fiber, or

layer by merely altering equipment controls. liquid additive is placed. In FIGS. 9, 10 and 11 it is shown how by controlling In conventional urethane casting, mold temperatures the movement of the spray unit over the mold it is pos- above 150°F induce mold fill problems. This degree of albie to alter layer thickness in the molded part to meet 25 temperature causes premature blowing ofthe foam and specific part needs. s increased polymer viscosity. This inhibits the spreading FIGS. 9 and 10 illustrate sections of doors. In FIG. 9 of the material evenly over the mold surface which re- the high density layer for the face has been increased suits, in unwanted, uncontrollable variations in densities

in thickness at its bottom 37 where kicking causes door and incomplete mold filling. damage. In FIG. 10 the same thing has been done but 30 With the present process it is advantageous to have

there is also added the thicker layer areas 38 where mold temperatures in the I 75°-200°F range. With the
pressure may cause damage as a concentrated load at sequential mechanical application as described, the
that point on the door. polymeric material (which is highly catalyzed) needs to
FIG. 11 illustrates integrally formed reinforcing ribs cure almost immediately on contact with the mold.
38’ made by extra spray passes of only the high density 35 This rapid cure prevents sagging on highly contoured
component in these areas prior to application of the mold surfaces and prohibits seepage of polymer to the

low density core material, face side of any decorative foreign materials (such as Referring specifically to FIG. 12, the method of man- stone aggregate) previously placed in the mold. The

ufacture is as hereinbefore described. FIG. 12 diagram- faster the cure time, the more production per mold and
matically 40 illustrates a technique of manufacturing a less cost per produced item. Also, with limited dwell
molded structural element, such as a door wherein time in the mold, catalyst migration (main cause of
each face comprises a layer of high density foam mold deterioration) Is nearly eliminated and mold life

backed up by a layer oflow density foam. Mold I is first (usually 200-300 parts with conventional molding contacted with a quantity of high density foam from 7A techniques) is tremendously increased (on the order of
and then with a quantity of low density foam from 7B 451,000-3,000%). applied as described and as shown in FIG. 3, A rein- Molds for thickwall parts (4 inches or more thick) for
forcing sheet 40 is then applied. A low density foam is conventional urethane molding are extremely costly supplied from 7B, and then a high density foam from because of the high pressures they must withstand.

spray 7A1. The finished molded product 12 is then re-
moved from 1.
Conventional molding of medium to high density (8-30 mold 50 lb/ft) foams generate pressures of 10-15 psi. For a 3

Thus, in accordance with the present invention feet-0 inch X 6 feet >(1% inches door, the mold must

molded urethane foam structural elements or parts are stand approximately 43,200 IN of pressure with con- produced. By the present process foam and cure ventional techniques. The present process exerts no

pletion times are reduced to one minute or less as corn- pressure on the mold.

pared to 10 to 20 minutes required by conventional During urethane molding the reaction of the isocya- techniques. Also since the mold is open, negligible, if nate groups with hydroxyl groups is exothermic, and in

any, pressures are involved and parts can be produced conventional urethane foam molding the production of

as large as desired, for example 10 feet X 70 feet. thick sections of high density foam generates large Parts produced with this techinque can have rigid 60 amounts of heat. This heat causes internal scorch and
walls which, in cross-section, have a dense surface zone splits and fissures within the foam. The present process and an integrally formed cellular core. The rigidity of using open molds allows the heat to dissipate rapidly as

an article varies with the cube of the thickness and Va- soon as polymerization is sufficiently completed thus

rica in approximately an Inverse proportion to changes eliminating scorch or splitting problems. With this pro- In density. Thus, the low density cellular core with high 65 cess new formulations with greater emphasis on the sill- density cellular walls as a construction has greater flex- cone surfactants will allow extremely rapid cell growth, ural strength than a uniform higher density wall of the The normal tendency of cell bubbles to collapse, par- same weight of material. The placement of the denser ticularly as the temperatures of the foaming polymer

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A second tape applLcator 16a is mounted directly In
back of or downstream relative to a dispensing probe 17. Accordingly, as soon as the setable foaming mixture has
been inserted or dispensed between the upper and lower
panel facings, the longitudinal edges nearest to the probe
are sealed together by a second transparent tape T2. There-

after, the foaming Ingredients will expand both vertically and laterally until all space is filled. This condition is

readily determined by mere inspection of the side edges of the panel which are sealed by the transparent tape. jo The foam dispensing and injection operation is accom-

plished by reciprocating probe 17 transversely relative to the direction of panel movement. In the apparatus shown, foam forming ingredients are stored In tanks 18 and 19

which are fed to a mixing head 21 that connects with 15 probe 17. An hydraulic cylinder 20 Is provided for recip- rocating the mixing head 21 and probe 17; and limit

switches (not shown) are disposed in the path of a control

arm to reverse the direction of hydraulic cylinder opera- tion, thereby providing continuous and cyclical recipro- gj cation. Flexible connections 18a and 19z connect tanks

18 and 19, respectively, with mixing head 21, thereby al-

lowing the mixing head and probe 17 to be reciprocated while the supply tanksremain relatively fixed.

The rate at which setable foaming mixture Is dispensed. 275 from mixing head 21 Is regulated from a control panel 22, and In a preferred embodiment, the setting of the con-

trol panel Is determined by the foam pressure against one of the transparent tapes. A pressure sensing device 23.

Positioned to engage the panel after the foaming mixture 30 will have expanded may also be used, to adjust the setting on the control panel. Referring to PIG. 2, conveyor means 11 also comprises

a series of upper pressure rollers 24 and side pressure roll-

ers 25. Upper rollers 24 limit the vertical expansion of the 33 foaming Ingredients and assure good contact at the inter- face between the setable mixture and the panel facings. Rollers 25 similarly contain the foaming mixture along the sides and provide added strength and backing for the

continuous transparent tapes. The disposition and use of 40

rollers 24 and 25 should allow processing of the panels along the conveyor 11 until such time that the mixture of foaming ingredients has taken a positive set. The corn- plated panel structure may thereafter be continuously fed

Into a take-off conveyor 26 which is of conventional desIgn. 45 If desired, a flying saw (not shown)’ or other cut-off means may be utilized and Incorporated into the system for cut-

ting the panels to selected lengths. Referring to FIGS. 3-9, there is shown a second em- bodiment of this invention In methods and apparatus for

moving a laminated panel structure as it Is formed be-tween first and second sets of rollers. More particularly,

conveyor 30 (which corresponds to the conveyor 11 of the first embodiment) comprises a firstset ofsupportive rollers

31 arranged horizontally In substantially straight line and 05

a second set of upper limiting rollers 32a, 32b, 32c and 32d. Each upper roller Is rotatably mounted at predeter- mined distances above rollers 31, the axis of each upper roller being oriented so that the bottom sllrfaçes therof contact the War contoured Surface of the facjng f wn &) said facinE Is raIsed under the prdsure ofthe foaming set-1 able mixture introduced etwtif facings

/

and 14 A plastic strip of vinyl tape T3,‘*’W_;fi’iha’y be fnserte between tha facings in advanci"of óo *jdr30 or suppllecl

on it tape reel33;. it Is enjaged4Mth the lodf- 05

tudinal cdges of facingaf3and / at’ astàtion’head’ *of’ª dispensing probe i7’The. interconnectl*n of facings r&

vide4by ta-pe,Ti maybe used as--ft interconn6ctiowfol

mpvlogor,pulling.onefacjng.(4’thjs 1nstance.1acfngf3). a.s..tbe other facing f4 is advnced by supportive;rollers 70

31. However J.s.,coatnplatd that 1he.laad ends fç/,apf4,.ay e!s9,.be.coject...J’y.a nuio

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tare has set, facing p’u]ied’6fi by well as the fully cured mixture of foaming coupgnentg. Referring to FIG. it a’ po tioned Intermediate rollers.1 and 32d engage a groove formed in the tape T5. It will be seen that wheels 34 pro- vide backing to prevent a.cçlIaq. and unwanted deforma-

tion of tape T3 while the. f ’ jnto
pressure contact therewun.::. ".......

. . . . . ,

As facings j and sup- portive rollers 31 and..upper cong grqllçç 32a -.32d,

they are fed into paralle,l;alignenti and maintained In

alignment by rollers 35 and 36 and apairbf Spacing wheels 37 and 3$. Referringto PIG..5, rollers 35 and 36

laterally contact hee4gesacs43.an4f4.j,espectively, while spacing wheels 317and"38 also inaftal’t1iŁ opposite longitudinal edges of;faciilgs14 ind, / ln oit1dlSpaed relationship. This allows robe 7 to b1n’sdctWet

the facings for dispensinti the setabIe’niixtuein li pattern as shown 1n’FiQ
is introduced betweenthelet-liaæd.edges bfahingS f.,.dnd’

as viewed in FIGS..5.and bymedtu;od;apaitdfTgtild wheels 39 and 40. TapeT ’may;bsupplIsom’a’lap roll 41. ’:...:

As indicated above, panelfacings’f and / removed directly and Indlrectly.by 4heSuppotive rollins 31 whicl are synchronously driven.bjra faotor 42’frogs aririve shaft 43 and through one ofapluralit,yof gear boxes 44. Each gear box essentiallj’ºomprfiand contains a Wo45

mounted to drive shaft ’43 nd eed by d gSr 4ó’, axially mounted to a rofler 31 ttirbugh a besring ’Mnc

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. . . . . J ’ 4,’ ....

The above described on+eyor apparatus ófp’th1tb1ai value since the moviti forŁØliuipsfed tp tbe lahiIntc panel structure being processed Is atfribtable n part the expansion forces of’thö fdaminj gikbld Sdir’"

than gravity forces abode. ThIS may be in1thpqriiIt f1 tor since small Interruptions of thd t,dºiaØ rŁn a change in rate of mdvciæbætth d1frutthô làth’intI6?f process and result In weak bö’nd1n "
The combined presence of bàth æsf6ti’ fdt6Snd
gravity forces Is best llhtstrafd in PIG’4fr6tiu*hI6li It

will be apparent that thdSefS’odnpl5thentbe’Æn6the1’ and produce a combined’force ’bffest;eSlagthefrlci. tional drive force which tuy be Imparted..tI11bWe

panel facing /4 by each’roller 31.i’uej’a.fbrtha–oft movement is assuredslncd’thlnór page ononeorse+era1

rollers 31 will have little oyerali effect)m -the total dth’e force available...

-,.........,,.,: "...r’ ,:’

Although a preferred form of:tho invention isilIustratSd and described, varlou&niodlflcâtlons’ and changes may bc resorted to without departing ftm the Spirit of the
tlon or the scope of the-appended clalms, and each of stiob

modifications and changes Is contemplatedc:.... What is claimed inii... f.
1. Apparatus of the kind described lot the contitiuoun manufacture of foamed laininatedipahel struottireg hav. lug a pair of panel facings. c,omprlsings’.ioller. means Ion

horizontally supporting aLp*Ofpanet.facInggjn pro-’ determined vertically spaced reiatinshp;means’fozhor1..t zont.Uy,mov3ng hepaneL.facjngb’apejativel.straight liner.while m nta1ning’ the.fg ficalllc saced

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able; with,oze facing, Ud itouectlig thapafs of.fIng, wherebymtlot SWAM cjng Juts
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Para solucionar este problema tØcnico la solicitud en estudio proporciona una aplicaciôn de rociado de una primera capa de resina sobre la superficie de la banda; la superficie de hecho esta asi cubierta uniformemente sin falta de homogeneidad que puedan dar origen a burbujas; una vez se ha expandido la capa aplicada por rociado, una segunda capa de resina liquida se puede verter en esta, produciendo asI un nUcleo aislante del espesor y densidad deseados.

El objeto de la presente invención se Ileva acabo de acuerdo con las caracterfsticas reivindicadas, en las reivindicaciones 1, 5, 11 y 15 (ver folios 43 a 46)

El objeto de la solicitud definida anteriormente se encuentra en la Clasificaciôn
Internacional de Patentes (IPC), B29C44/22; B29C44/32; B29C44138; B29C44146;
B29C44/00; B29C44/34

3. De la solicitud de Patente

3.1. Reivindicaciones (artIculo 30 D 486)

Se observa que la reivindicaciôn independiente I menciona caracterIsticas de
. proceso y no de producto que serIa lo correcto; tambiØn se sugiere que las reivindicaciones independientes mencionen las caracteristicas conocidas en el
estado de la tØcnica, en el preªmbulo, y seguido del tØrmino "CARACTERIZADO
POR" se muestren las caracteristicas tØcnicas novedosas propias de la solicitud, y
que la diferenciarian del estado de la tØcnica; teniendo cuidado de no incluir: usos,
ventaja, efectos o funcionamientos, los cuales no deben hacer parte de las reivindicaciones. En las reivindicaciones del panel de aislarniento, proceso y aparato para la fabricación de este, con rociado de resina extensible, solo debe estar: La forma, disposición, ubicación, construcción de cada una de las partes y como se acoplan entre si.

Con lo anterior se busca que la reivindicación independiente de mayor claridad y delimite mejor la invenciôn, para reflejar el verdadero alcance de la protecciOn.

TambiØn se observa que las reivindicaciones 5, 6 y 15 mencionan en su parte caracterizante el termino sustancialmente, que no ayuda a delimitar o cuantificar la caracterizaciôn hecha.

La reivindicaciôn 15 al ser de "mØtodo", no deberla de basar su dependencia en las reivindicaciones I a 4 que mencionan un "panel’; ya que se darla una falsa

dependencia; tambiØn se sugiere fusionar las reivindicaciones 5 y 15, ya que corresponden al mismo tipo de reivindicación variando ünicamente en una
producción continua y una discontinua.

4. Determinación del Estado de la TØcnica

Se buscaron documentos del estado de a tØcnica relacionados, con fecha de publicación anterior a 2003-08-01 que puecen afectar la patentabilidad del objeto de la presente solicitud, encontrÆndose:

NO Documento TItulo\, Fecha de Publicación

DI US3872199 FACE LAYER Jun 16, 1971

D2 US3834967 APPARATUS FOR FORMIHG Sep 1974 FOAMED PANELS

5. AnÆlisis de patentabilidad (artIculo 14 D486)

5.1. Novedad (articulo 16 D 486)

Teniendo en cuenta que el documento US3872199 (mencionado de ahora en adelante como Dl), que se refiere a: un "FACE LAYER" y al comparar elemento par elemento de la invención tal como estÆ definido enlas reivindicaciones 1, 5 y 15, con el documento Dl, vemos que el dicho documento contiene todas las caracterIsticas tØcnicas, coma son:

Reivindicación I Correspondiente al panel aislante:

o Dos caras opuestas, una capa de una primera resina polimØrica expandida rociada sobre al menos una de dichas caras y un nücleo aislante. Ver Dl columnas 3 a 7; elementos 2, 18 y 32 a 36 y Figuras I a 12.

Una segunda resina polimØrica expandida contigua a dicha capa. Ver Dl, columnas 3 a 7; elementos 2, 18 y 32 a 36 y Figuras I a 12.

Reivindicación 5 Correspondiente al MØtodo para la producción continua de Paneles:

Rociar una resina polimØrica expandida sobre a menos una de las bandas. Ver D1 columnas 3 a 7; elementos 2, 18 y 32 a 36 y Figuras I a 12.

Reivindicación 15 Correspondiente al MØtodo para la producción discontinua de Paneles:

o Rociar al menos una de las caras una capa de una resina de polimero expandible. Ver Dl columnas 3 a 7; elementos 2, 18 y 32 a 36 y Figuras I a 12.

Aplicar una resina de polimero expandible en una condiciôn sustancialmente liquida. Ver DI columnas 3 a 7; elementos 2, 18 y 32 a 36 y Figuras I a 12.

Permitirle a la resina expandirse en un molde. Ver Dl, columnas 3 a 7; elementos 2, 18y32a36 yFiguras 1 12.

Realizada la comparaciOn del documento Dl con las reivindicaciones independientes 1, 5 y 15 de la solicitud de patente de invención, se observa que dicho documento contiene todas las caracteristicas tecnicas; con lo cual quedarla desvirtuada la novedad de esta.

Teniendo en cuenta que el documento US3834967 (mencionado de ahora en adelante como D2), que se refiere a: un "APPARATUS FOR FORMIHG FOAMED PANELS" y al comparar elemento por elemento de la invenciOn tal como estÆ definido en la reivindicaciôn II, con el documento D2, vemos que el dicho documento contiene todas las caracterIsticas tØcnicas, coma son:

Reivindicaciôn 11 Correspondiente al aparato para la producciôn de paneles:

Unos medios para rociar una resina, y medios de primer polimero expandible para aplicar un Uquido. Ver DI columnas 2 a 4; elementos 17, 21 y Figuras 1 a 9.

Un aparato con una cabeza rociadora movible hacia y transversalmente con relación a la direcciôn de avance de la banda. Ver Dl columnas 2 a 4; elementos
17, 21 y Figuras I a 9

Realizada la comparacion del documento D2 con las reivindicaciôn independiente 11 de la solicitud de patente de invenciôn, se observa que dicho documento contiene todas las caracteristicas tØcnicas; con Ia cual quedarla desvirtuada la novedad de
esta.

6. Conclusion:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados asI:

N° FDocumento NO Reivindicaciones Afectadas Requisito que Afecta

Dl US3872199 1-5-15a21 Novedad

D2 US3834967 11 a 14 Novedad

En cumplimiento del artIculo 45 de la Decision 486 de la ComisiOn de la Comunidad Andina, se le indica que debe dar respuesta dentro del tØrmino de sesenta dias contados a partir de la fecha de notificaciOn de la presente comunicaciOn. En caso de no dar respuesta al presente requerimiento, a si a pesar de la respuesta subsistieran los impedimentos para la concesiOn, se denegara la patente.

NotifIquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capitulo quinto del titulo prim de Ia Circular Unica No 10 de 2001.

ALIX CARMEIçIIA CESPEDES DE VERGEL

Directora d!)d’uevas Creaciones (C)

El anterior requerimiento fue notificado par fijaciOn en lista, de fecha

-DA- JUJ.

CONCEPTO TECNICO No. 1590 EXAMINADOR TECNICO COdigo No. 84