Decoral®

The value of a decorated world

Decoral Quality

Index

PRELIMINARY REMARK

To obtain the highest quality result on the Decoralò process it is very important to work as following:

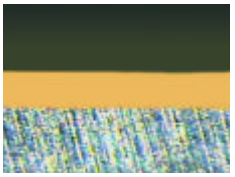
Pre-treatment of aluminum

- Yellow Chrome

- Phospho chromate

- Chrome-free

Layer thickness of powder coating must be from 60 up to 90µm



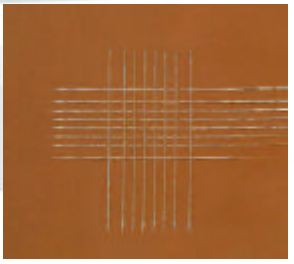
Curing of powder coating (polymerization)

- Minimum 15” at 210°C
- **Ideal 20” at 200°C**
- Maximum 25” at 195°C

The **2mm CROSS CUT TEST** is an easy way to check during production if the above mentioned working conditions are respected.

Blistering of the layer means one of the following problems.

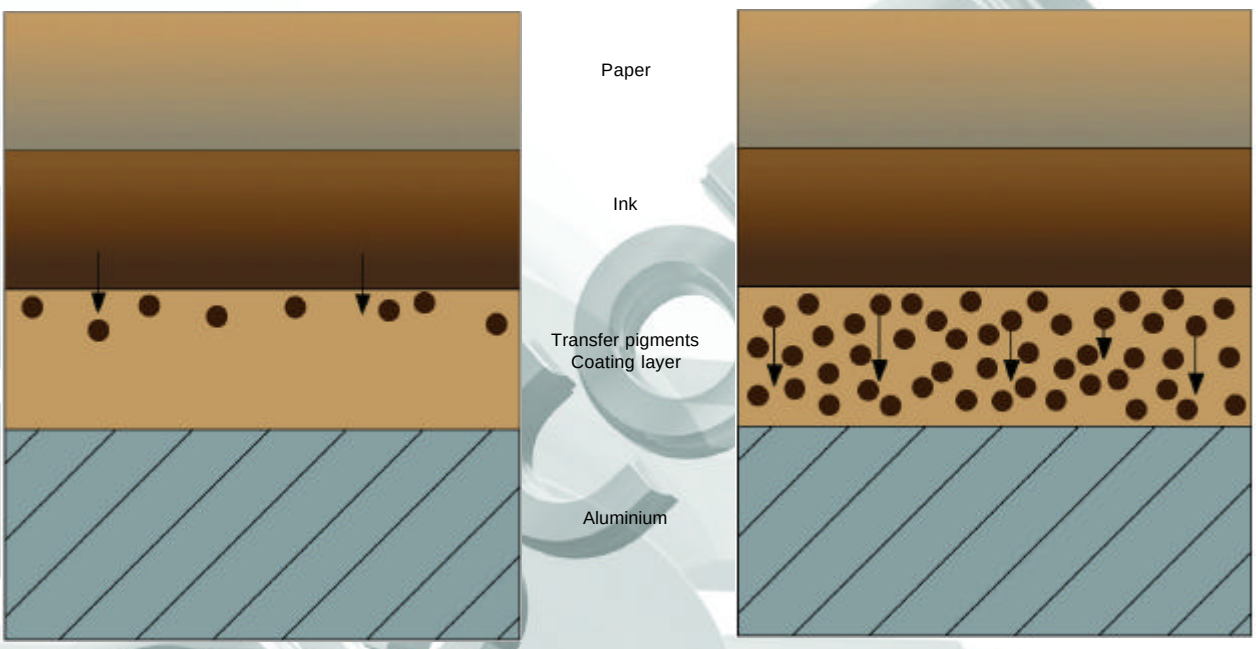
1. Pre-treatment not correctly executed.
2. Excess of powder layer thickness.
3. Not correct polymerization.



INK PENETRATION INTO THE COATING LAYER

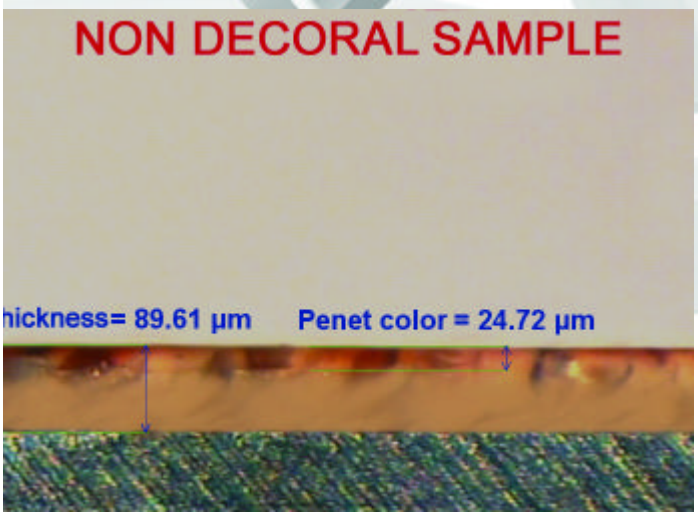
The Decoralò process consists in a heat transfer system, that is based on the physical reaction that makes the inks from solid stage becoming gas and again solid.
At the correct temperature and pressure, the pigment inks transfer from the paper support and move into the synthetic layer of Decoralò powder, fixing the original color and position into it.
The key factors for the best quality and results are: right temperature, time and mechanical pressure.
Since the full penetration of the pigment inks into the coating layer is the basic condition to get the highest quality result our company has adapted a microscope control system, that allows an immediate quality check of the decorated pieces.
Another reason for using this test is the easy way to check how the pigments melt with the paint molecular structure.
This control is very important because our experience states that not always the use of the Decoralò powder coating gives the best results after decoration process, but only the right combination between powder, inks and working procedures grants the maximum result.

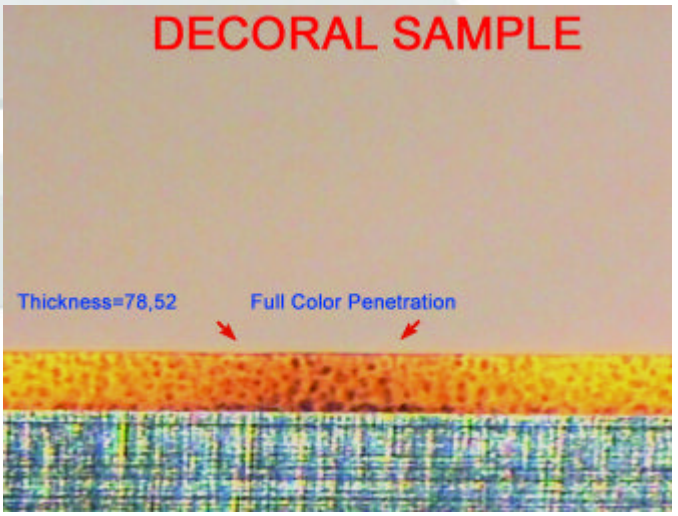
PENETRATION OF INKS in relation to pressure, temperature and time



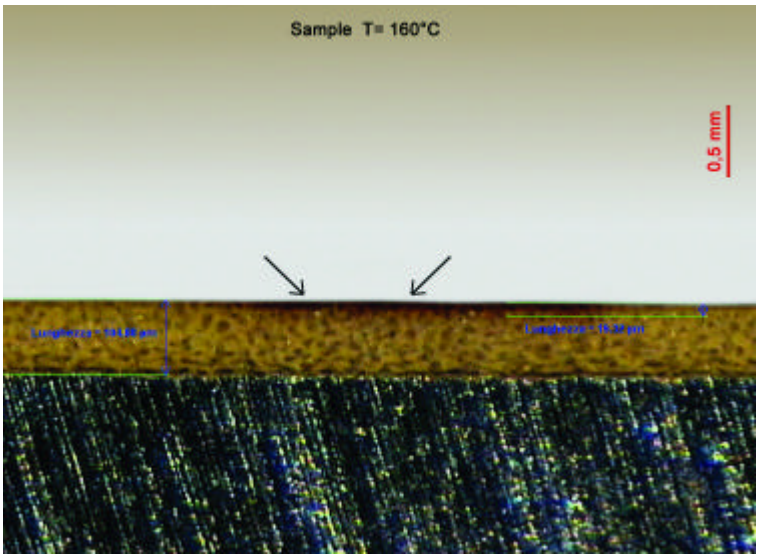
Low pressure
Low temperature
Wrong powder
Wrong film
Wrong application

Right pressure
Right temperature
Perfect time
Plus right powder and film
Right application





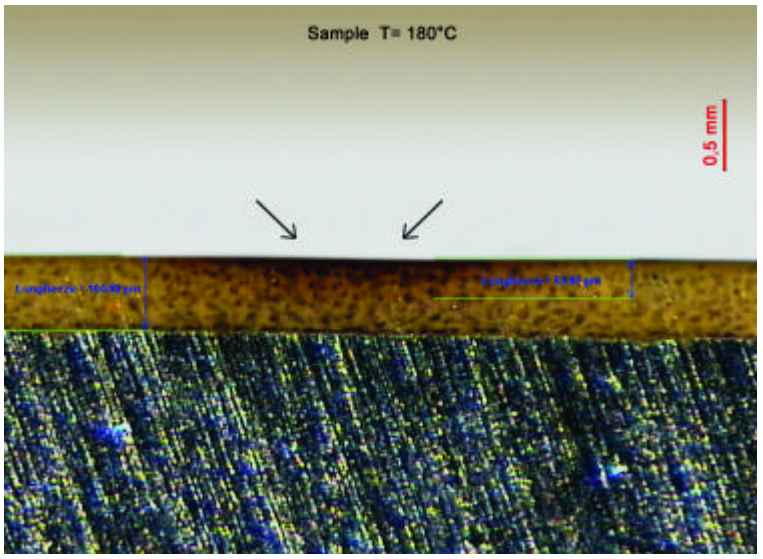
PENETRATION LEVEL ACCORDING TO APPLIED TEMPERATURE
ON POWDER COATED AND DECORATED ALUMINUM PROFILES



Aluminum profile decorated at 160°C.

Enlarged by 120 times.
Powder coating thickness = 104,88 µm
Ink penetration depth = 19,32 µm

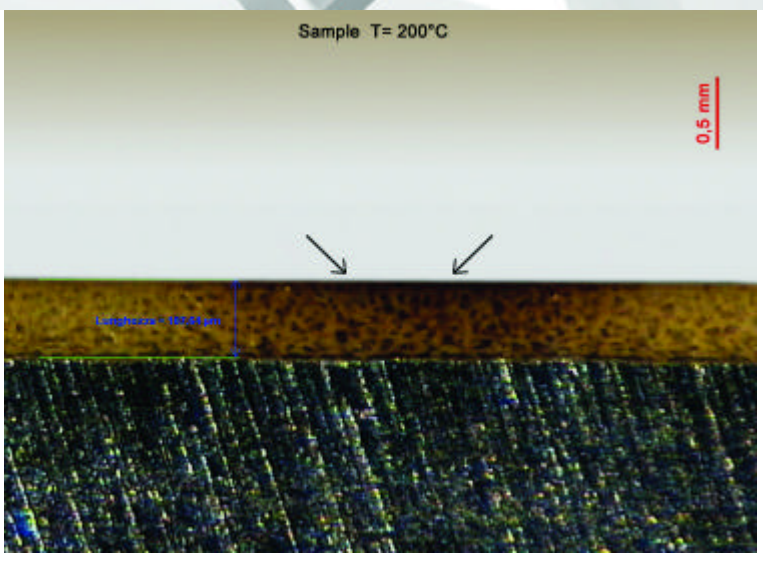
LOW TEMPERATURE



Aluminum profile decorated at 180°C.

Enlarged by 120 times.
Powder coating thickness = 104,88 µm
Ink penetration depth = 53,82 µm

MEDIUM TEMPERATURE

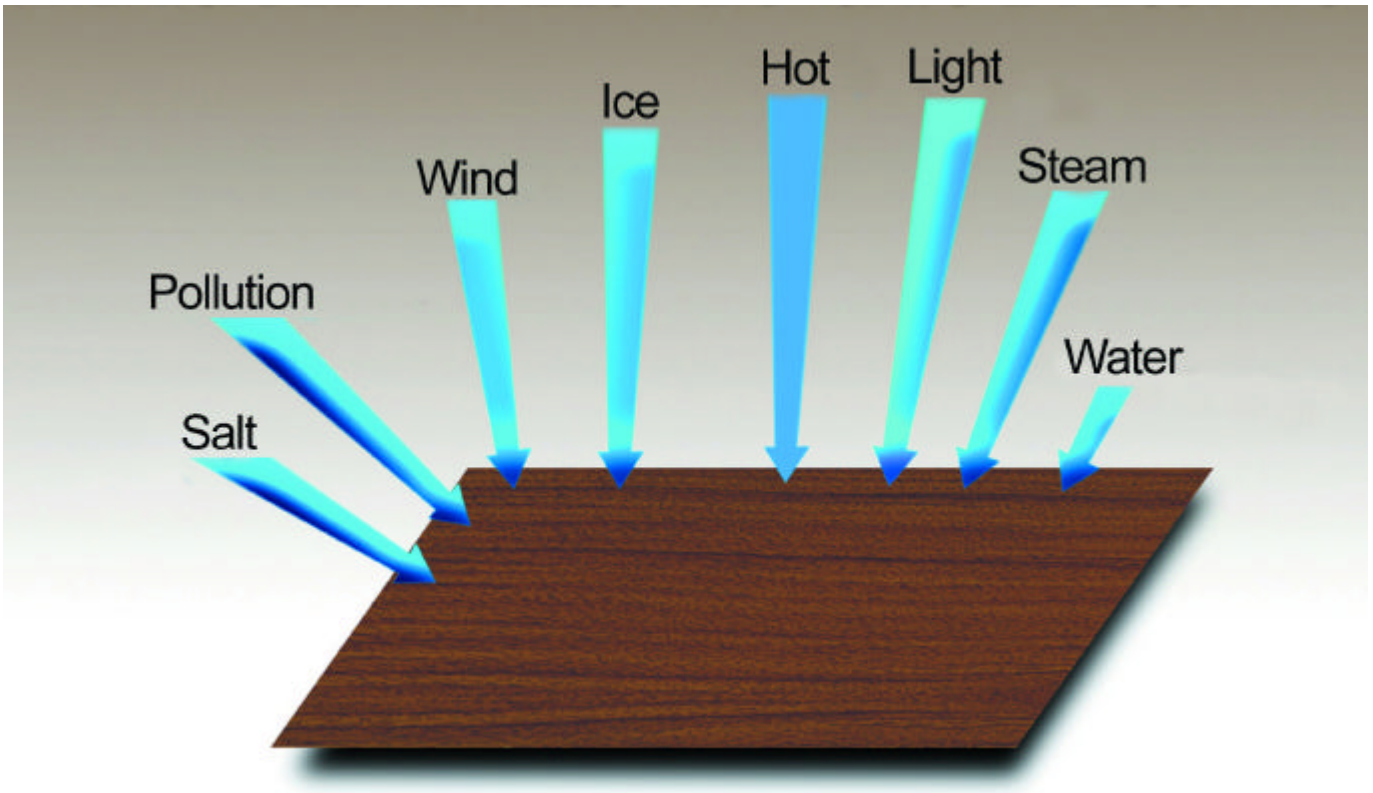


Aluminum profile decorated at 200°C.

Enlarged by 120 times.
Powder coating thickness = 107,64 µm
Ink penetration depth = 107,64 µm

BEST TEMPERATURE

ATMOSPHERIC AGENTS:
THE ENEMIES OF MANUFACTURED ARTICLES



Painting the surfaces of manufactured articles has a key role in protecting products especially for architectural use.

In the recent years, the request for high protection performances has contiuosly increased to give the needed guarantee to the market .

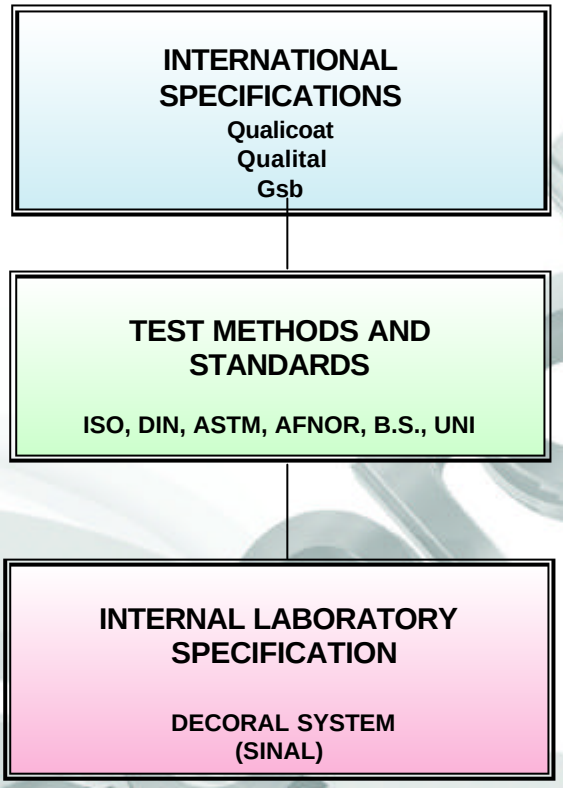
Decoral process is a solution to give the metal surface an aesthetic value together with a strong protection against the atmosphere agents.

Decoral products are constantly submitted to the most severe durability tests both in laboratories and in outdoor exposure like **Florida**, **Venice** and other worldwide location.

That is why **Decoral** is a worldwide highly successful process.

Decoral offer raw material to licensees to grant the maximum resistance against all the aggressive agents, in order to satisfy market expectations.
This is our commitment now and in the future. Our policy is to make a reliable product: that is why most of Decoral patterns have been certified by international quality institutes.

TEST LABORATORIES AND CERTIFICATION INSTITUTES



Everyday many tests are carried out on **Decoral** samples in order to assure the best quality level and grant **Decoral** process a daily control and guarantee.
Decoral is also certified by the following international quality institutes and associations.

- QUALICOAT: International association for quality control on wet paint and powder coating applied on aluminum for architectural use. The head quarter is based in Switzerland and each member country has its own branch.

- QUALITAL: Italian association for industrial certification of aluminum that certify coated and decorated samples according to **Qualicoat** specifications. Accredited by Sinal* under certificate N°0275, Qualital is a testing and researching laboratory on aluminum coated products.

- FEM: German testing laboratory specialized in coated and decorated aluminum samples. FEM is the authorized laboratory of the German association for quality control on wet paint and powder coating on aluminum (GSB).

- TESSILE DI COMO: an independent italian testing laboratory accredited by Sinal* under certificate N°0045.

- ATLAS WEATHERING SERVICES GROUP: American laboratory and natural exposure station in Florida where real exposure tests are carried out according to Qualicoat specifications.

- SINAL: Certifying agency for testing labs. Giving the highest level of certification for independent testing labs.

Q.U.V. TEST

EVALUATION TEST FOR THE RESISTANCE OF POWDER COATED METAL AGAINST U.V. RAYS AND WATER CONDENSATION.

1. Aim of test

This test evaluates the resistance against ultraviolet rays radiation, alternated with the condensation of water at a controlled temperature, on a piece of a coated metallic support, that enables to simulate the weather of sun radiation and rain (or humidity), and their effects on the deterioration of the coating layer.

2. Principle

The method consists of exposing the coated samples in a chamber with four lamps simulating the U.V.B. spectrum (the most destroying one) at a controlled temperature of 40+/- 3 C. The samples are exposed at alternative cycles of 4 hours UV radiation and 4 hour of humidity condensation for a minimum of **200 hours with QUVB lamps.**

The alternation between radiation and humidity simulates the weather action (sun/rain or humidity) on the examined coated items.

The samples are regularly checked during the time of exposure, in order to verify the progressive alternation occurred on the layer.

The damages, that coating normally show are:

a) loss of gloss;

b) loss of colour.

3. Equipment.

The equipment, named Q.U.V. Accelerated Weathering Test, consists on:

- test chamber, with possibility to locate and bind the samples on the prepared windows containing lamps with U.V. light and the nozzles to spray the atomized water;
- eight lamps which issue the U.V. light with a maximum of 313 nm. Each lamp has a power of 40 W;
- electrical resistance to heat the test chamber;
- spraying equipment, connected with a tank of demineralized water;
- timer to define the test cycle;
- thermometer to check the test temperature;

4. Preparation of the test samples

The coated samples with a layer of 60/70 microns measure normally 75x150 mm.

It is important to keep for each exposed sample a copy as a reference to compare them at the end of the test. To start the test it is necessary to wait at least 24 hours after the coating.

5. Procedure

The samples are positioned and fixed into the chamber and the timer is set with the normal cycle of 4 hours of radiation and 4 hours of humidity condensation.

Temperature is 40+/- 3 C.

All the spaces in the testing chamber must be filled in completely, in order to maintain the standard testing condition.

Every 24 hours the samples must be checked, in order to monitorize their progress.

At every control you have to evaluate;

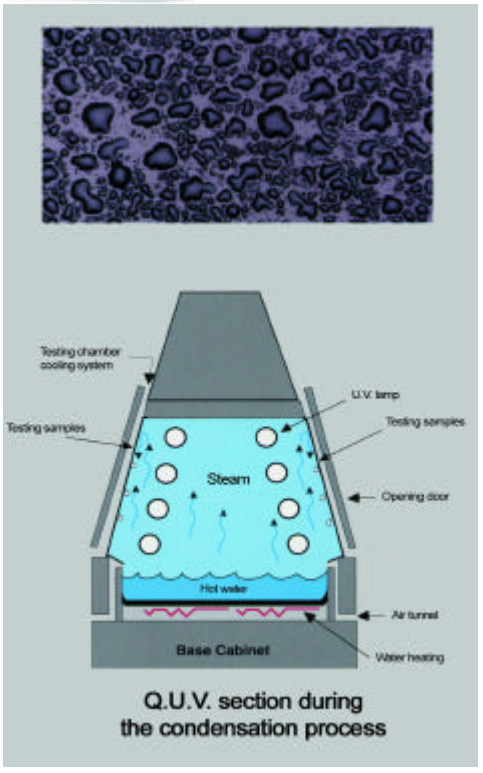
1. The remaining gloss level at 60°
2. The remaining colour measured through the DeltaE system

6. Results

The Qualicoat specifications requires a minimum of 50% of remaining gloss and a DeltaE variation of 2 after a minimum of 200 hours of QUVB lamps test.

If after 200 hours of exposure the remaining gloss is still over 50% the test will continue till this value is reached.

3. Machine QUV



Q.U.V. section during the condensation process

2. Q.U.V. machine lateral section

Exposure test in Q.U.V - B313nm
4 hours of light at 60°C; 4 hours of humidity at 50°C

Shining in gloss

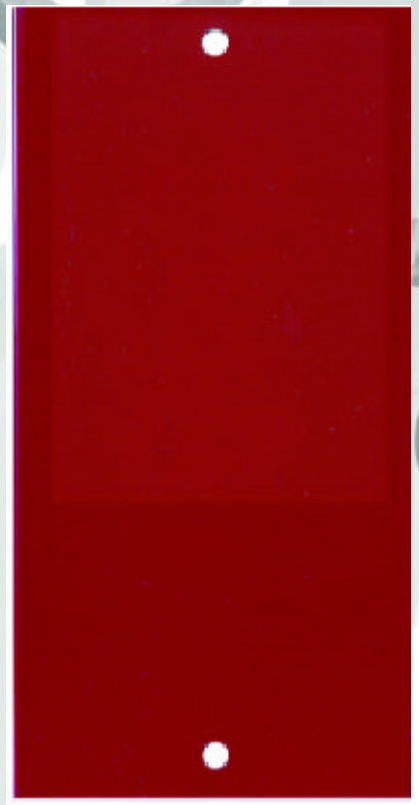
Initial	Final	Remaining
18	10	56%

NOCE B7

48 HOURS	5
118 HOURS	5
214 HOURS	5
310 HOURS	5-
332 HOURS	4+
478 HOURS	4

Shining in gloss

Initial	Final	Remaining
62	32	52%



RAL 3003 PE

48 HOURS	5
288 HOURS	4
456 HOURS	3+

Shining in gloss

Initial	Final	Remaining
70	16	23%

RAL 6005 PE

48 HOURS	5
288 HOURS	3
456 HOURS	2

Shining in gloss

Initial	Final	Remaining
63	23	37%

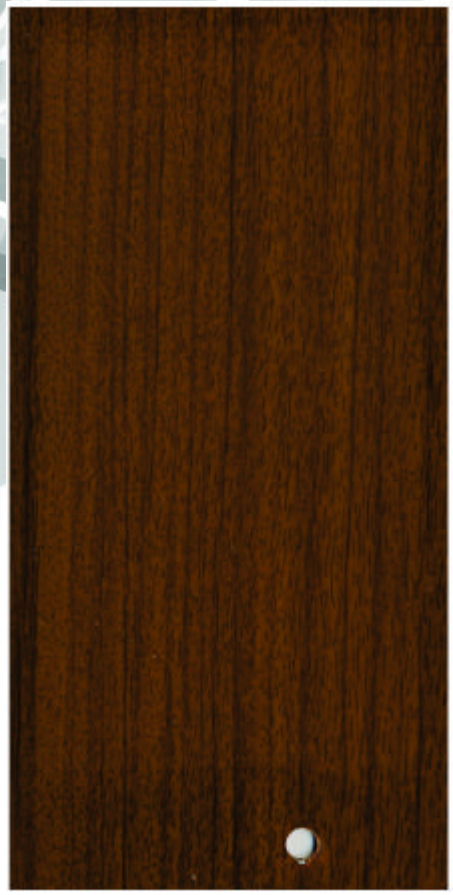
RAL 8014 PE

48 HOURS	5
288 HOURS	3
456 HOURS	2

iNDEX:
5=uneffected, 4=good, 3=sufficient, 2=unacceptable, 1=not good

Exposure test in Q.U.V - B313nm
4 hours of light at 60°C; 4 hours of humidity at 50°C

INDEX:
5=uneffected, 4=good, 3=sufficient, 2=unacceptable, 1=not good

	ACACIA A7	NOCE B7	RADICA D7
	Shining in gloss	Shining in gloss	Shining in gloss
	Initial 23 Final 18 Remaining 78%	Initial 23 Final 13 Remaining 57%	Initial 25 Final 17 Remaining 68%
			
144 HOURS	5	5	5
216 HOURS	4+	4+	4+
313 HOURS	4	4	4
408 HOURS	4	4	4

CYCLE - B 313 NM: 4 HOURS OF LIGHT AT 60°C.: 4 HOURS OF HUMIDITY AT 50°C

Evaluation after an exposure of:

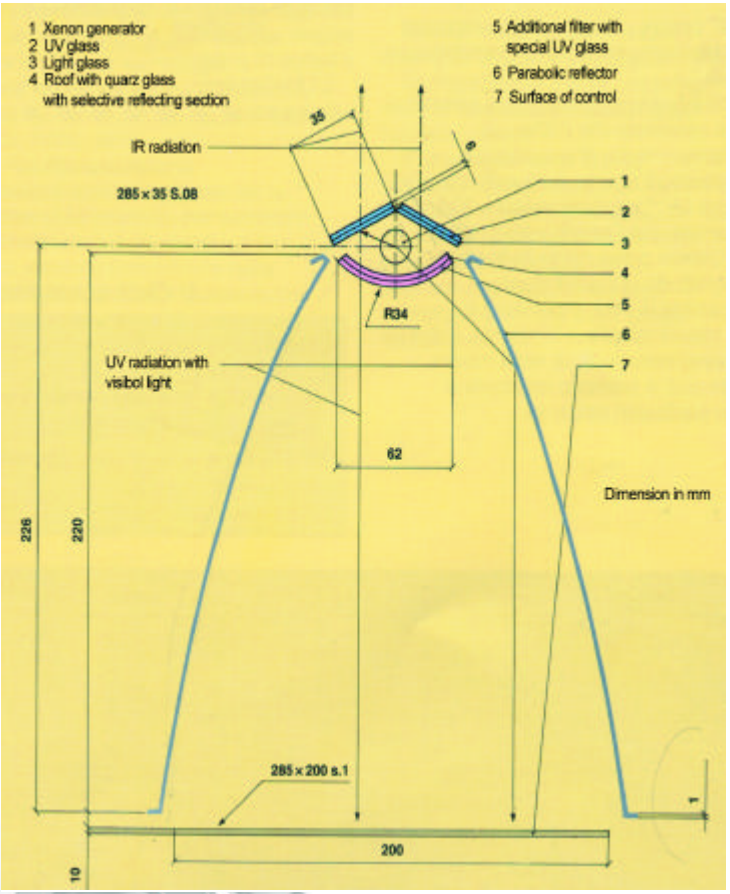
	G7	DECORAL POWDER	RAL 8024 PE	NON DECORAL RAW MATERIAL
168 hours	5-	5-	5-	5-
360 hours	5-	5-	4	4
432 hours	4: GOOD	5:UNEFECTED	3: SUFFICIENT	2: NOT ACCEPTABLE

SOLARBOX 1500E.

The machine is QUALICOAT approved and is taken as reference for the accelerated ageing and all the settings parameter are as per QUALICOAT specification.
The tests carried out by this machine last 1000 hours with a continuous UV radiation.
The xenon lamp has a power of 1500W and is completed with appropriate filters that eliminate the shorter wavelengths.
Radiation and temperature are constantly controlled, using appropriate certified setting instruments.
This machine can carry out two different type of test:

1 - LIGHT FASTNESS (dry test);

2 - ACCELERATED WEATHERING (dry plus wet test)



Xenon lamp structural arrangement

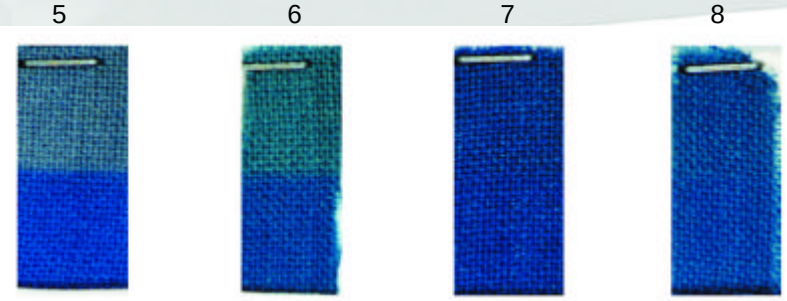
Solarbox instrument for Solartest

1- LIGHT FASTNESS TEST

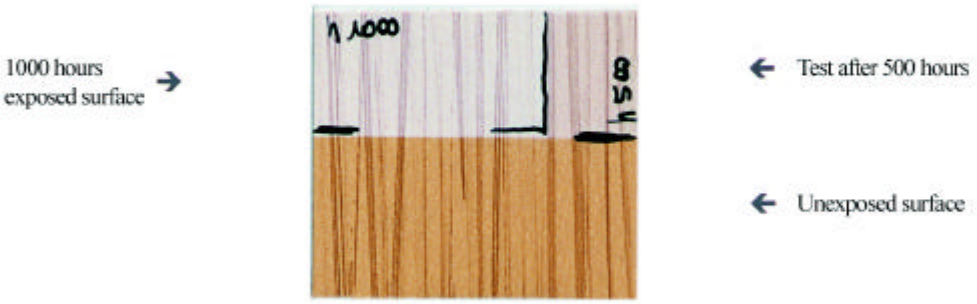
CARRIED OUT IN“SOLARBOX 1500E” MACHINE WITHOUT FLOODING CYCLE AND WITH“XENON” LAMP FOR 1000 HOURS.

The light fastness test consists in exposing coated samples together with a specific range of blue fabrics with different and fixed UV resistance to a radiation of 550W/m2 and temperature of 50° C, produced by a 1500W xenon lamp equipped with suitable filters for 1000 hours. The test is carried out according to ISO 105B02-88 and is used to verify light fastness of ink pigments, in other words, to prove the light resistance of colors.
After the 1000 hours of exposure, the difference between the exposed and unexposed coated samples is compared to the difference between the exposed and unexposed surface of the blue fabrics numbered from 1 to 8.
The degradation of the blue fabric (from one to eight) closest to the degradation of the coated samples is chosen as result of test.
The minimum result accepted by QUALICOAT specification for architectural and building industry, as specified in the standard UNI 9983 and in European specifications, is to be equal or higher than number 7 in the blue fabric scale.

	P8 ROVERE	D7 RADICA scura	F7 ROVERE scuro
Unexposed sample			
Exposed sample			
	Index >7	Index >7-8	Index >7



Accelerated test for resistance light executed with Solarbox machine equipped with Xenon lamp for a 1000 hours time.



NON DECORAL RAW MATERIAL

Institut
für Oberflächentechnik
GmbH

TEST REPORT

Refers to	**Light resistance testing of wood-like coated Aluminium sheets**
Instructed by	**Viv-Decoral S.p.A.** **Viale del Lavoro, 5** **I-37040 Arcole (Verona)**
Order No.	**I1A 080**
Date	**10.07.2001** E:\Kunden-Ifo\Gutachten\I 1 A 080 Viv-Decoral- Lichtechtheitprüfung\010710 Prüfbericht englisch.doc
No. of pages	**5**

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1 Formulation

To determine the lightfastness of the applied wood-like coating of the submitted sheet Aluminium samples according to DIN 54004 and ISO 105 Part A2. (Samples 15 – 26).

2 Implementation of Lightfastness testing

The lightfastness testing was carried with the Suntest-CPS from Hereaus, Hanau according to DIN 54004 but with a radiant exposure of 765 Watt/m², a black panel temperature of 35°C with a relative humidity of approx. 50 %. Evaluation was made visually according to the grey scale ISO 150 / part A02 and to the blue wool colour scale DIN 54004.

3 Test results of Lightfastness testing

The results are listed in the following table, according to the given exposure times.

	Grey scale -evaluation of various exposure times						
Sample	96 h	264 h	411 h	483 h	664 h	879 h	1000 h
15	5	5	5	5	5	5	5
16	5	5	5	5	5	5	5
17	5	5	5	5	5	5	5
18	5	5	5	5	5	5	5
19	5	5	5	5	5	5	5
20	5	5	5	5	5	5	5
21	5	5	5	5	5	5	5
22	5	5	5	5	5	5	5
23	5	5	5	5	5	5	5
24	5	5	5	5	5	5	5
25	5	5	5	5	5	5	5
26	5	5	5	5	5	5	5
Wool strip 4	4/5	4	3/4	2/3	1/2	1	1
Wool strip 5	5	4	3/4	3	2	1/2	1
Wool strip 6	5	4	4	3/4	3	2/3	2
Wool strip 7	5	5	4/5	4	3/4	3	2/3
Wool strip 8	5	5	5	4/5	4/5	4/5	4

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4 Evaluation results of Lightfastness testing

The individual samples and the material strips were each half covered, as seen in Picture 1.

Material strips are used for the evaluation of lightfastness. Whilst the material strips, described with 8, shows the highest lightfastness, the material strips 7 - 6 - 5 - and 4 represent a lower graded lightfastness. As the table shows, wool strip (No. 4) already shows a contrast equivalent to level 3 of the grey scale after approximately 450 hours of exposure. The samples tested with it however, show identifiable grey scale values of 5.

The contrast value of level 3 was not reached by any samples after a weathering time of 1000 hours. Therefore the samples are assigned lightfastness level 8.

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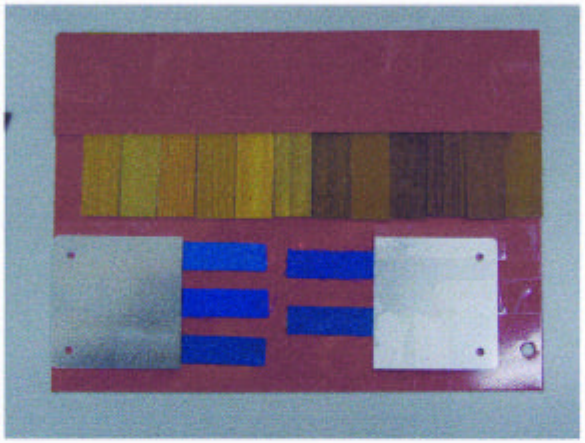
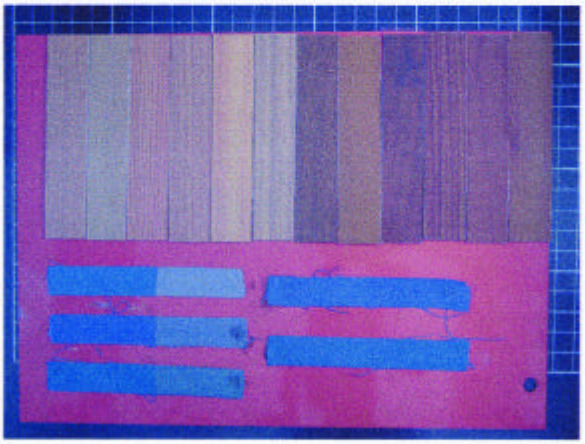
5 Sample order

Picture 1 Lightfastness testing - Begin



Picture 2 Lightfastness testing - End



Responsible person

Michael Schack

Institute Director

Dipl.-Ing. (FH) H. Pfeifer

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Stuttgarter Str. 3, D-73525 Schwäbisch Gmünd

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Dipl. Ing.(FH) Michael Müller

Bankverbindung: Landesbank Baden-Württemberg
BLZ 600 501 01, Konto 800 88 91

2- ACCELERATED WEATHERING TEST

CARRIED OUT IN“SOLARBOX 1500E” MACHINE
WITH FLOODING CYCLE AND “XENON” LAMP FOR 1000 HOURS.

The accelerated weathering test is carried out by using the SOLARBOX 1500E machine. The samples are placed into the testing chamber for a duration of 1000 hours under continuous UV radiation and wet cycles of 18 minutes every 102 minutes, where samples are completely flooded with water.
The set radiation level is 550 W/m2, with sample temperature of 65°C, according to Qualicoat specifications.
A 1500W/m2 xenon lamp is used, with filters eliminating radiation having a shorter wavelength not present in sunlight.
This test simulates the ageing of materials caused by exposure to the action of water plus sunlight. Degradation damages are loss in gloss (measured according to ISO 2813 at an angle of 60°) and loss of colour (measured with ΔE* (DeltaE) formula according to ISO 7724/3).
According to the QUALICOAT specifications, the loss of gloss at the end of the test must not exceed 50% of initial value and the ΔE value must not exceed the values specified in annex 8B of the Qualicoat specifications, that is a maximum value of 2.

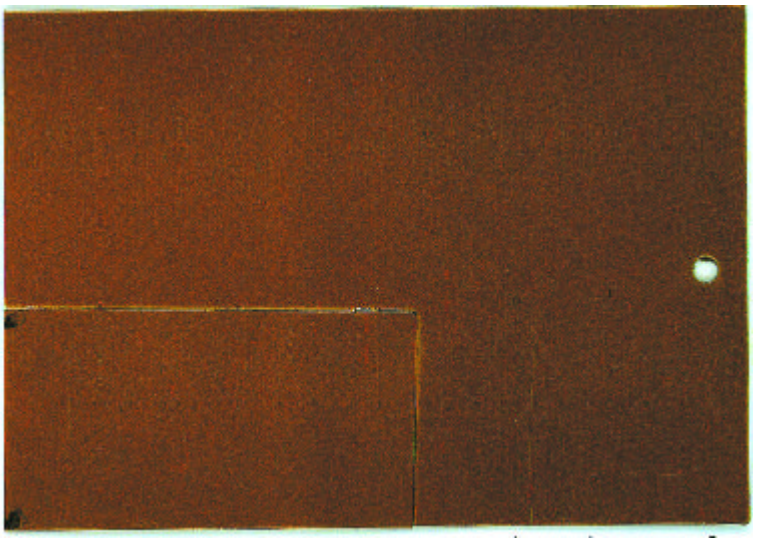
*ΔE is the value referring to the chromatic difference between two colors

Sample nr. 246

DECORAL powder coating.

Initial gloss: 27
Final Gloss: 26
Residual: 96%

ΔE value: 0.9

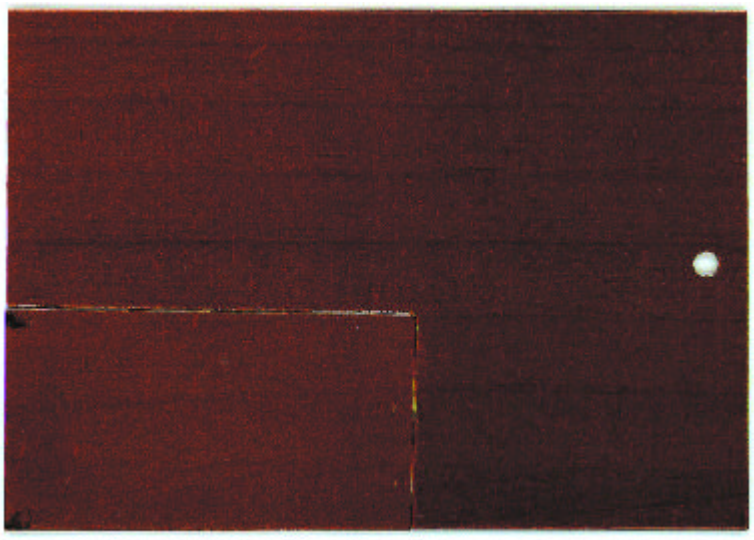


Sample nr.247

DECORAL powder coating.
DECORAL film: 9007/401

Initial gloss: 25
Final Gloss: 24
Residual: 96%

ΔE value: 1.52



FEM
FORSCHUNGSINSTITUT
FÜR EDELMETALLE
UND METALLCHEMIE
SCHWÄBISCH GMÜND

Nach DIN EN 45001 akkreditiertes Prüflabor
Deutscher Akkreditierungs Rat
DAP-P-02.503-00-93-02

FEM • Katharinenstraße 17 • D-73525 Schwäbisch Gmünd

VIV-Decoral
Costeggiola

I-37030 Cazzano di Tramigna

- ☐ Edelmetallforschung, Metallkunde
- ☐ Elektrochemie, Galvanotechnik, Korrosion
- ☐ Aluminium-Oberflächentechnologie
- ☐ Physikalische Oberflächentechnologie
- ☐ Materialphysik
- ☐ Metallographie, Analytik
- ☐ Umweltanalytik

Datum 13.11.00
Zeichen Fr/bt
Durchwahl (0 71 71) 10 06- 20

TESTING REPORT

Reg.: "Sun-Test" and light fastness test

ORDER NUMBER: **5L00054**

samples received: 07.08.00
samples taken by: customer
date of testing: 26.09.-07.11.00
condition of the sample: ok

Description of the sample

24 "wood-like" coated Al-sheets, 8 of them for accelerated weathering, 8 for the light fastness test and 8 reference-pieces.

accelerated weathering

Sample Number	Base coat code
1	5336848-278+9197/401
2	5336848-278+9052/405
3	5336848-278+9090/401
4	5336848-278+9103/401
5	5336808-51+9061/401
6	5336808-51+9018/406
7	5336808-51+9044/401
8	5336808-51+9104/402

Katharinenstraße 17
D-73525 Schwäbisch Gmünd
Telefon (071 71) 1006-0
Telefax (071 71) 1006-54
e-mail: fem@fem-online.de
internet: http://www.fem-online.de

Leitung: Dr. H. Jehn, Dr. A. Zielonka (Stv.)

Bankverbindung: Kreissparkasse Ostalb
BLZ 614 500 50, Konto 440 030 393
Gerichtsstand für beide Teile ist Schwäbisch Gmünd
VAT/USt-IdNr.: DE 146 754 991

Durch das DAP - Deutsches Akkreditierungssystem Prüfwesen - akkreditiertes Prüflabor
Die Akkreditierung gilt für die in der Urkunde aufgeführten Prüfverfahren
FMPA-Begutachtungs-Stelle

light fastness

Sample Number	Base coat code
9	5336848-278+9197/401
10	5336848-278+9052/405
11	5336848-278+9090/401
12	5336848-278+9103/401
13	5336808-51+9061/401
14	5336808-51+9018/406
15	5336808-51+9044/401
16	5336808-51+9104/402

Description of the test

- 1000 h of accelerated weathering ("Sun-Test") according to ISO 11341, evaluation according to Qualicoat specifications
- Testing of the light-fastness according to DIN 54004 and ISO 105 B02

Description of the investigations executed

- Accelerated weathering (ISO, 11341, 1000 h, cycle A); testing device "Suntest CPS", manufacturer Atlas Co.
- light-fastness (DIN 54004, ISO 105 B02); testing device "Suntest CPS+", manufacturer Atlas Co.

Results

a) accelerated weathering

sample number	*0h (Start)*		*1000 (end)*		*loss of gloss (%)*		*ΔE*
	60°	*85°*	*60°*	*85°*	*60°*	*85°*	
1	37,1	80,1	26,9	76,3	27,5	4,7	ca. 1
2	36,8	74,8	25,6	77,1	30,4	---	ca. 1
3	35,9	80,4	23,2	77,1	35,4	4,1	ca. 2
4	30,3	74,3	19,5	73,5	35,6	1,1	ca. 1-2
5	33,1	81,1	18,0	75,5	45,6	6,9	ca. 2
6	28,4	75,7	21,0	74,3	26,1	1,9	ca. 2
7	32,3	76,4	17,3	73,3	46,4	4,1	ca. 2
8	27,1	72,8	16,1	72,6	40,6	0,3	ca. 2-3

Remarks:

- According to the Qualicoat specifications, the loss of gloss (measured with the 60 ° angle) must not exceed 50 %. All samples tested fulfil this requirement.
- The Qualicoat specifications also state that the change of colour (ΔE) must not exceed 3.0 (for the RAL number 1011 and 1002).
  Due to the wood-structure of the samples tested it was not possible to measure the ΔE-value with a spectralphotometer. Therefore the samples had to be evaluated visually by help of the grey scale standard (according to DIN 54001 and ISO 105 AO2), which allows only a rough estimation.
  According to this evaluation all samples have a ΔE-value < 3,0 and therefore fulfil this Qualicoat requirement.

- The ISO 11341 allows relative wide tolerances for the spectral energy distribution during the accelerated weathering. We usually operate the “Sun-test“ at the lower limit. During this test a new xenon-arc lamp was used, and though it was calibrated,

it had a much higher energy distribution than usually (about 15 % higher), but was still within the tolerance (at the upper limit). The values which you find in the above table in the column "1000 h (end)" are the values after 840 h (which corresponds to 1000 h of the usual sun-test). Of course, the samples were tested for 1000 h, but due to the higher output of the lamp this corresponds to about 1200 h of usual testing. For this reason, all the samples have lost much more gloss in the last 100 hours of testing than usual.
Due to the high tolerances of the energy distribution but also of other parameters as the air-temperature, relative humidity etc., the results of the accelerated weathering can generally vary very strongly. Therefore it is advisable to compare only samples which were exposed within the same test; only then it is guaranteed, that they had identical testing conditions.

b) light fastness

sample number	9	10	11	12	13	14	15	16
light fastness no	> 7	> 7	> 7	> 7	> 7	> 7	> 7	> 7

Remark
According to DIN 54004, the light fastness numbers range from 1 (very poor) to 8 (very good). However it is not possible to measure light fastness "8", since the testing time would be very long. Therefore the test is finished, when stage "7" is reached. If a sample then still shows no change of colour, it has the light fastness ">7", the highest possible light fastness which can be stated according to the responsible standard.

Schwäbisch Gmünd, den 13.11.00

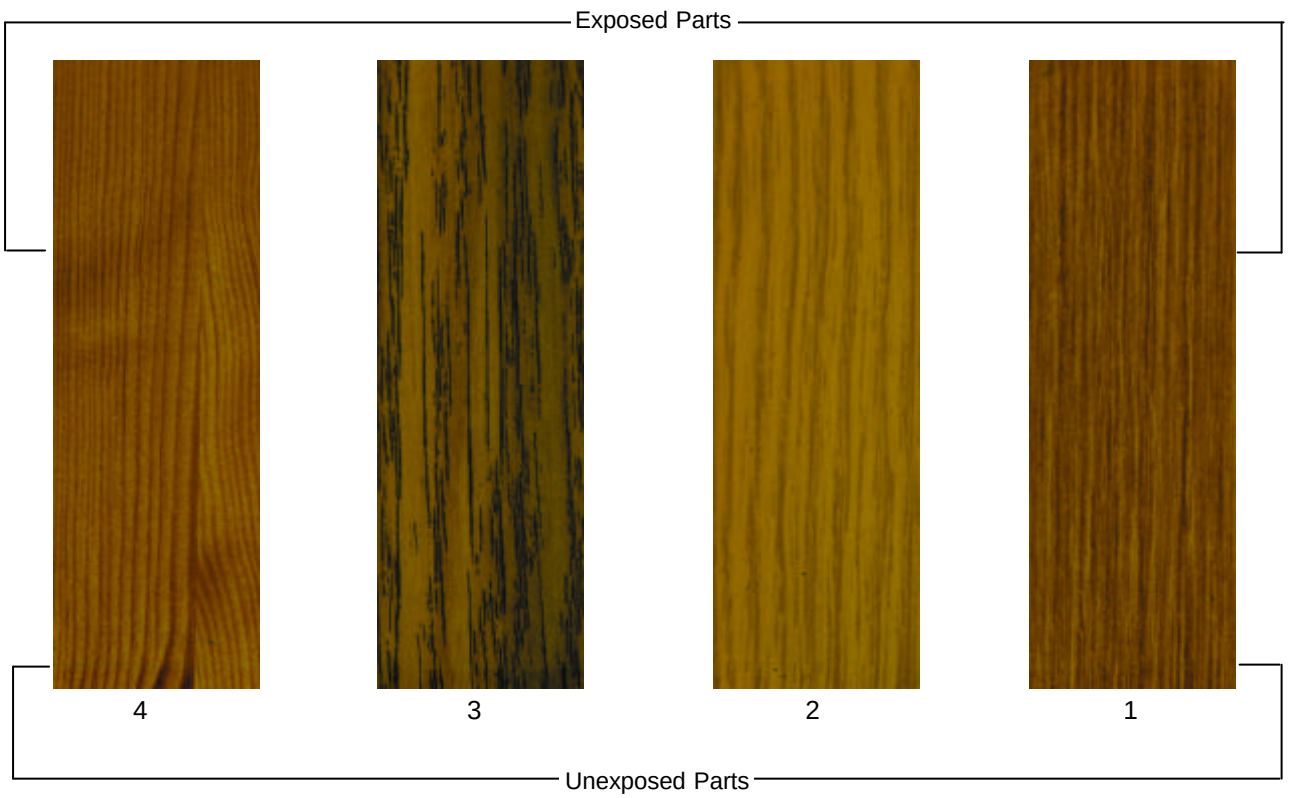
Director

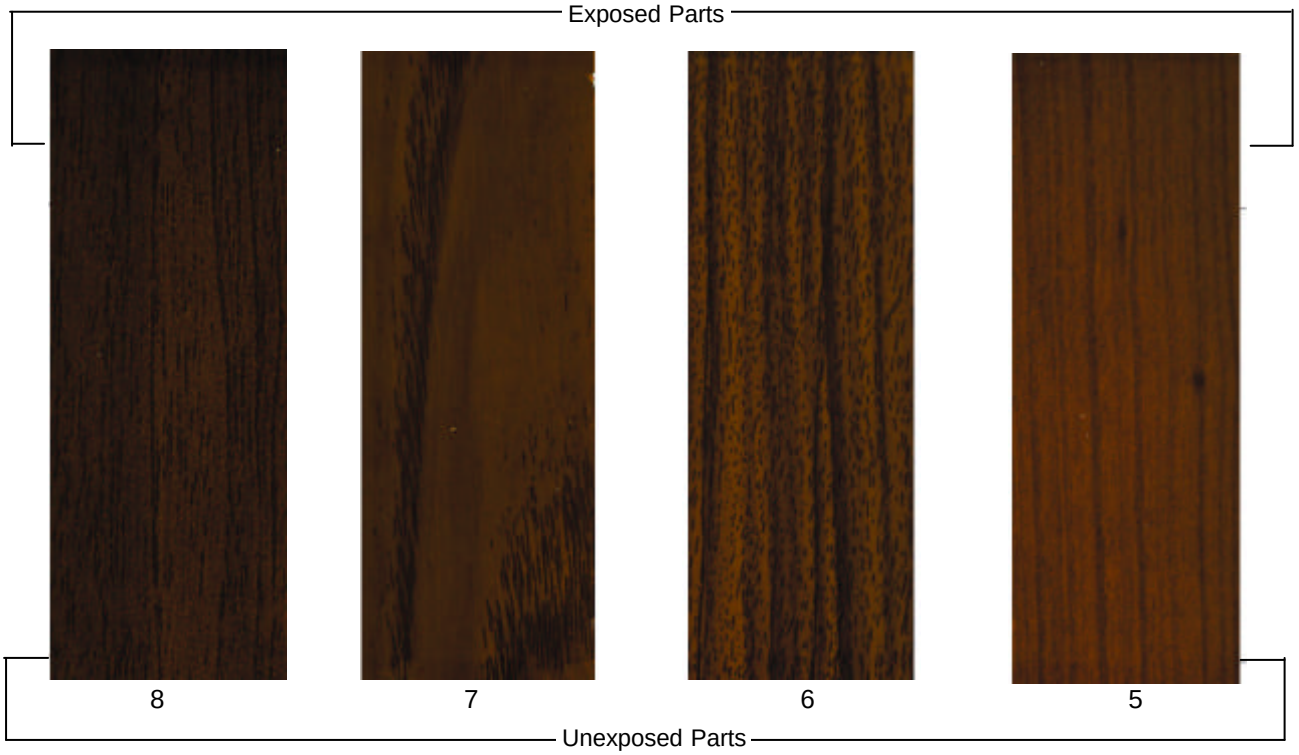
Dr. H. Jehn

Adaptor

Dipl.-Ing. J. Freudenberger

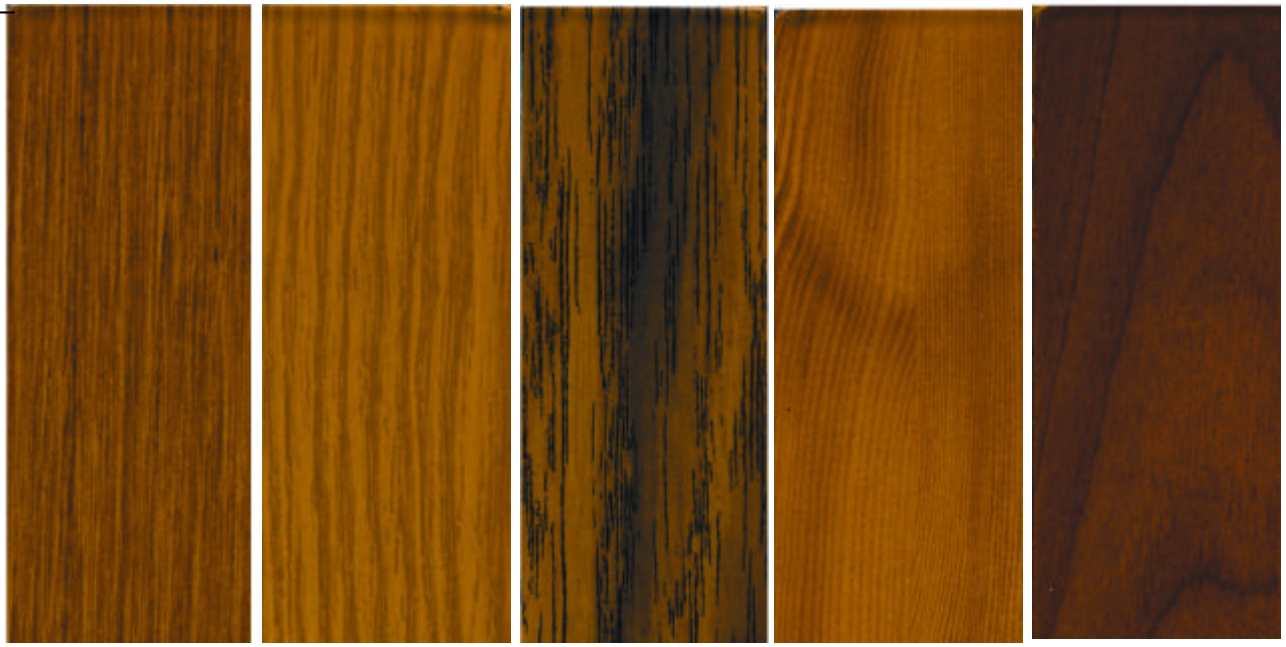
Accelerated weathering test.





Light fastness.

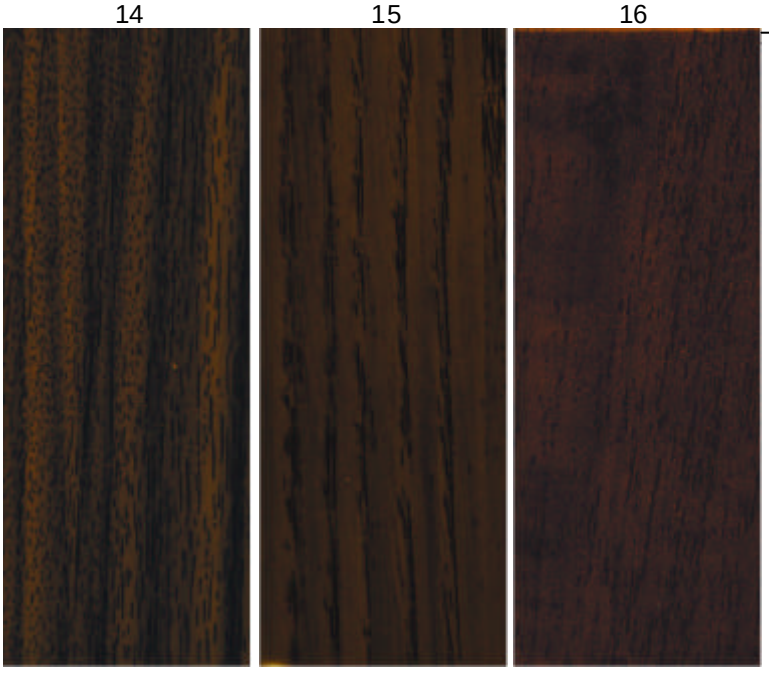
Unexposed Parts



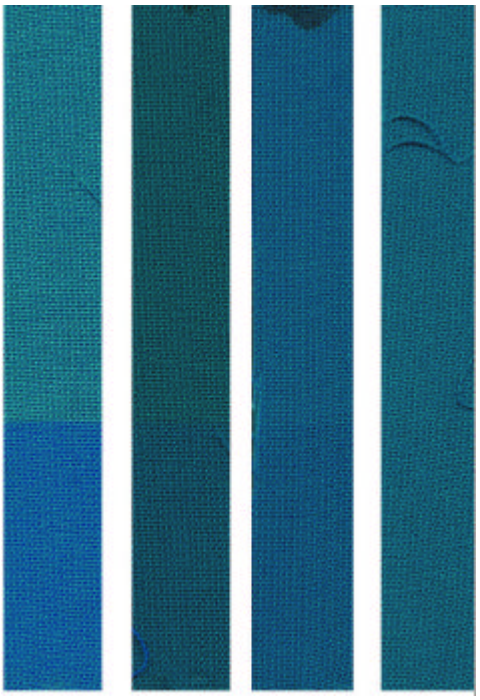
9 10 11 12 13

Unexposed Parts

14 15 16



5 6 7 8



FEM

page 1 / 3

FEM

page 2 of 3

TESTING REPORT

Samples referred to the FEM report dated 23/08/98

A7 ACACIA

B7 NOCE

Colour alteration or index of colour fastness considering:
ISO 105B02
DIN54004

Referred to the production of January 1996

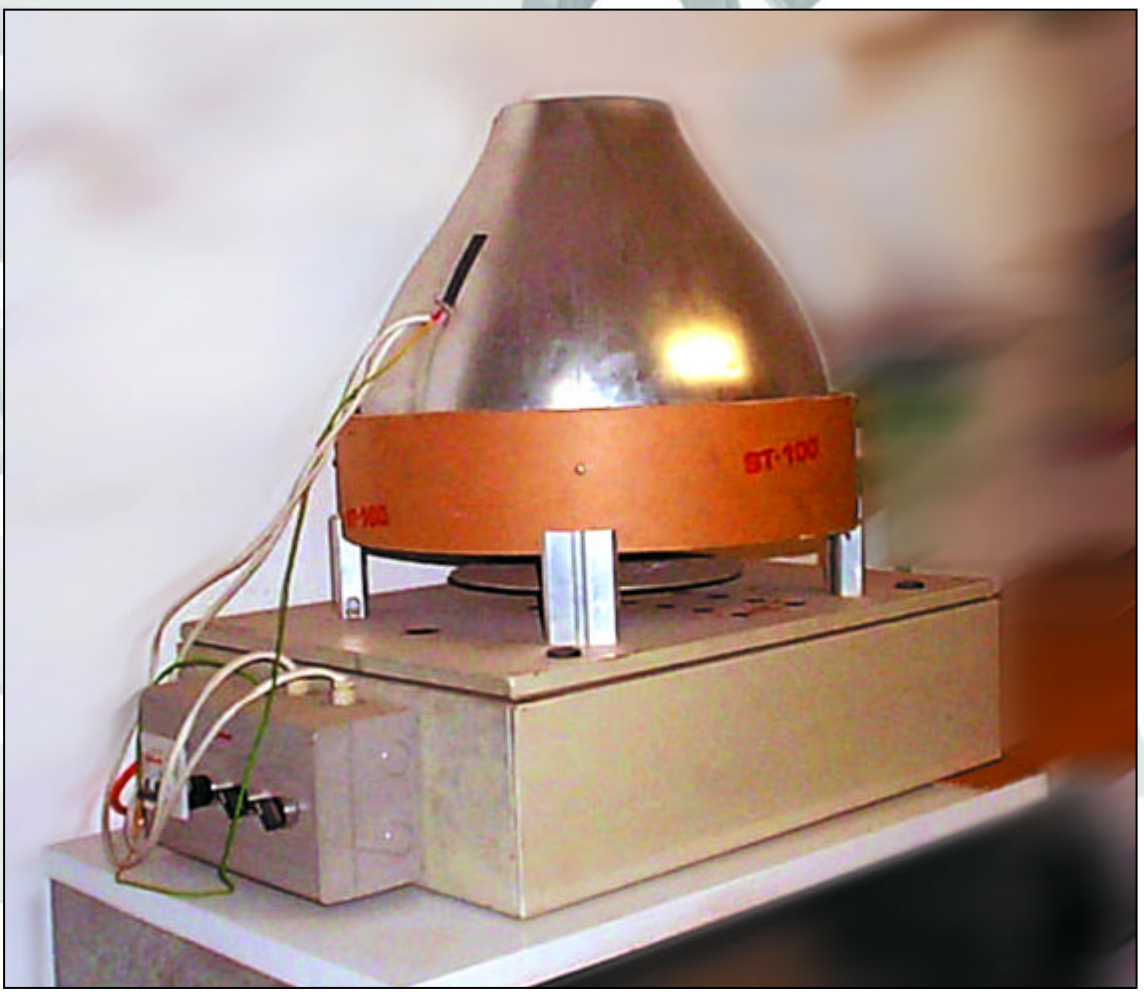
Loss of gloss and accelerated ageing considering:
ISO 2809
DIN 53231

UV TEST

ACCELERATED TEST OF LIGHT RESISTANCE
CARRIED OUT WITH “UV” LAMP PHILIPS HPK 125 W

This is a destroying test made according to the rule UNI 4529 and is used to **have in a short time** an idea of the light resistance of coated samples.
The coated samples are located under the metallic bell, together with a specific range of blue fabrics with different and fixed UV resistance, under a radiating 125W lamp, at a temperature of 40° C and with a distance from the samples that may change according to the speed and intensity of the test.
Once the fabric nr 8 of the blue scale starts to change color, the test stops and the coated samples are measured and checked. The difference between the exposed and unexposed coated samples is compared to the difference between the exposed and unexposed surface of the blue fabrics numbered from 1 to 8.
The degradation of the blue fabric (from one to eight) closest to the degradation of the coated samples is chosen as result of test. The minimum result accepted by QUALICOAT specification for architectural and building industry, as specified in the standard UNI 9983 and in European specifications, is to be equal or higher than number 7 in the blue fabric scale.

UV Lamp Philips HPK 125W

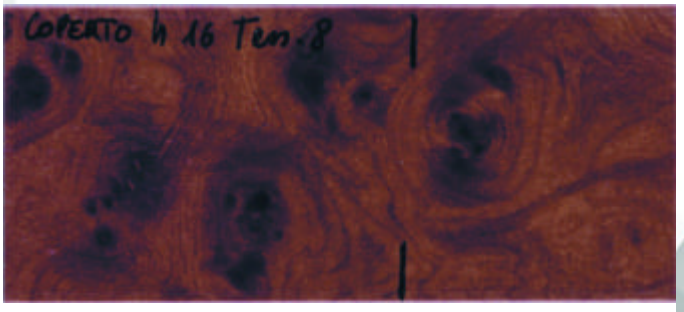


DECORAL LABORATORY - “UV” TEST

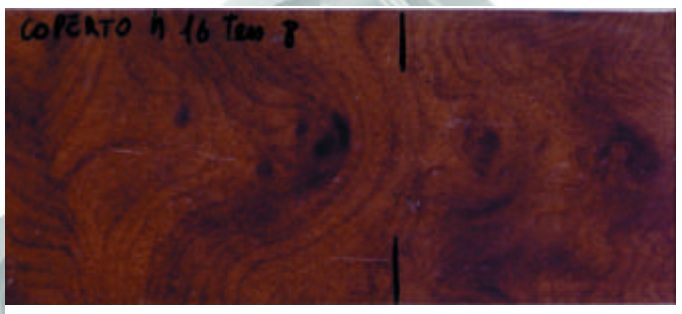
The test stops when the fabric n.8 of the blue scale starts changing color

B7 - NOCE

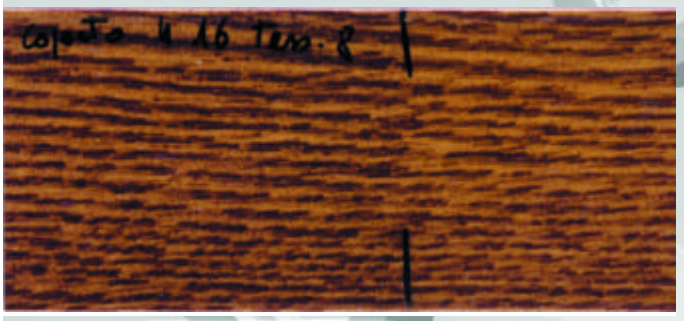
B7L - NOCE



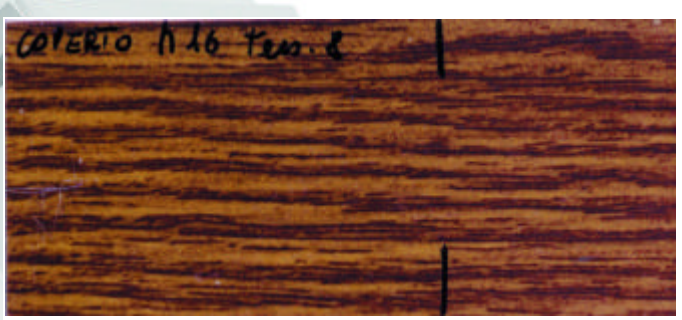
D7 - RADICA S.



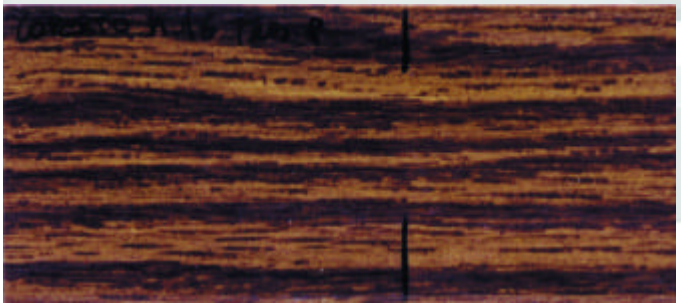
D7L - RADICA S.



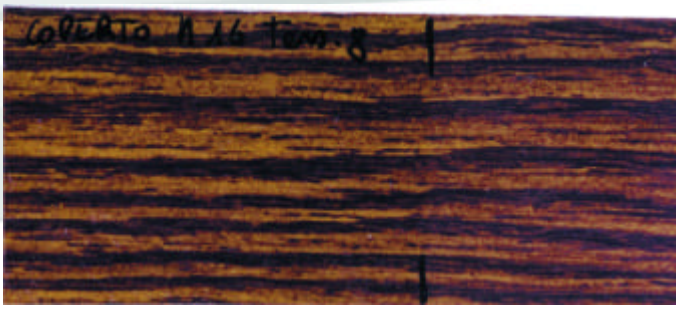
E7 - ROVERE C.



E7L - ROVERE C.



F7 - ROVERE SC.

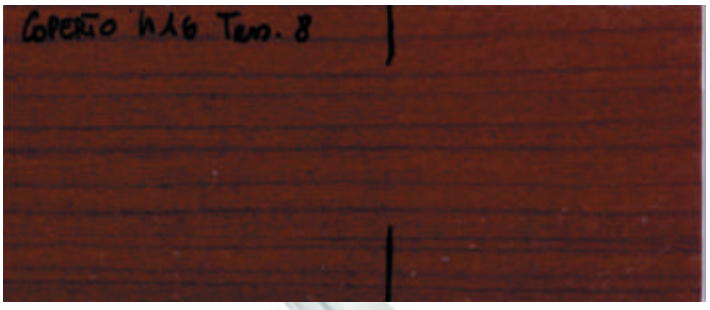


F7L - ROVERE SC.

DECORAL LABORATORY - “UV” TEST

The test stops when the fabric n.8 of the blue scale starts changing color

G7 - CILIEGIO



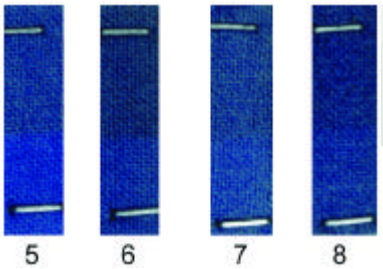
G7L - CILIEGIO

302 - ROVERE SC.

302 - ROVERE CH.

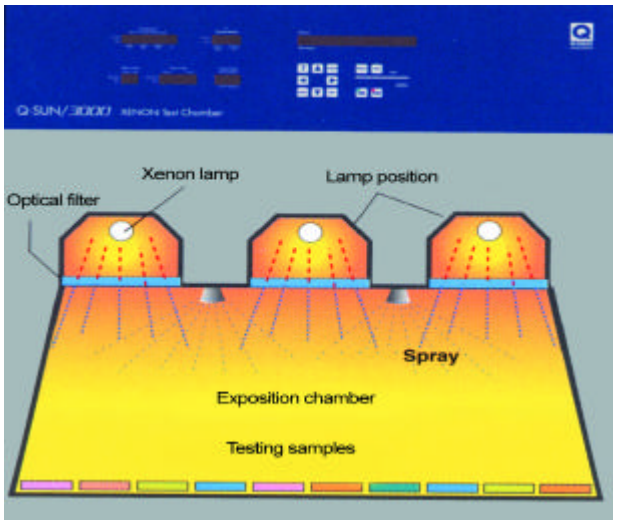
VIV LABORATORY

UV TEST
TEMPERATURE: 40°C
HOURS: 16
LAMP DISTANCE: 35 cm.



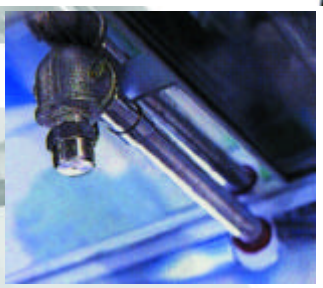
Q-SUN 3000.

Q-sun 3000 is a machine designed and built to simulate the external atmospheric agents (sun,rain etc.) to which materials are exposed during their life.
The test is carried out for 1000 hours according to Qualicoat specifications, alternating a humidity cycle of 18 minutes every 102 minutes radiation cycle at 550W/m2.
Contrary to the Solarbox, which floods the samples with water, Q-Sun 3000 sprays atomized demineralized water, simulating the effects of outdoor humidity.
The drops that lay on the surfaces of the coated samples increase the degradation process as they act as lenses.



Q-Sun Section

Q-Sun Machinery



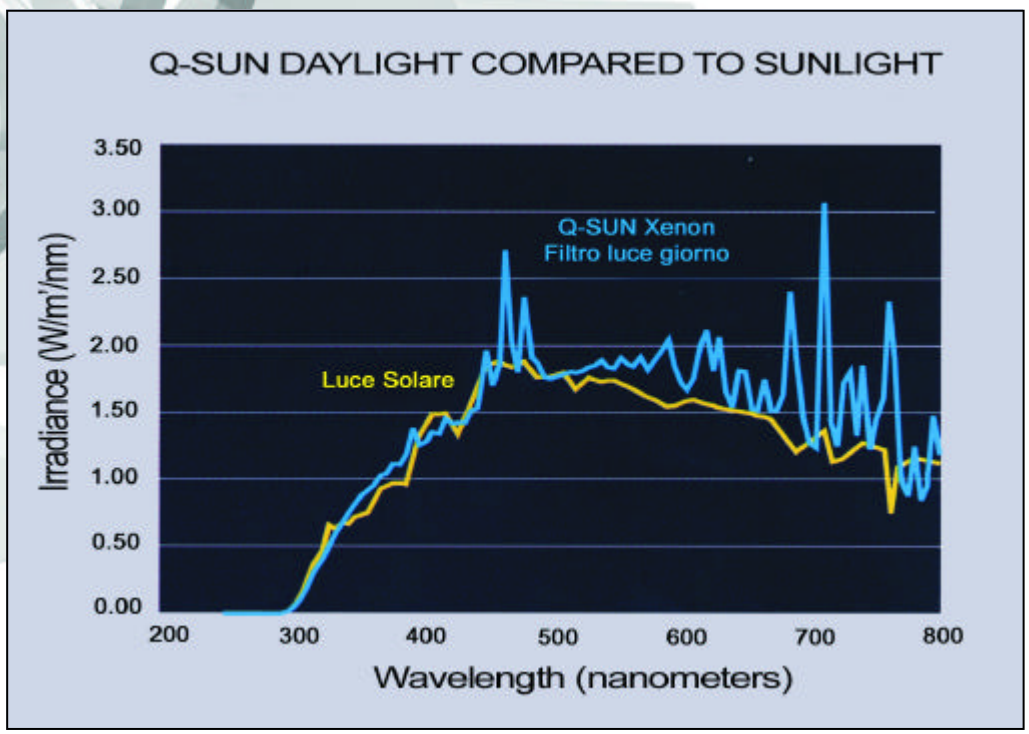
Spray water nozzle

Simulation of Sunlight.

When materials are exposed outdoors, and therefore, to direct sunlight, they are subjected to maximum light intensity for only a few hours a day, and usually, for some weeks in summer.
Q-Sun accelerates the ageing effects of exposed materials on sunlight, since it is built to simulate the midday summerlight.
The machine uses xenon lamps that is filtered to reach the sunlight radiation spectrum.

Q-Sun Xenon Daylight filter

Sunlight



SAMPLES SUBMITTED TO ACCELERATED WEATHERING TEST USING Q-SUN3000 MACHINERY

Cycle: Q-SUN 3000 (290-800nm) Power: 550W/m² Temperature: 65°C
Cycle: 18 minutes of spray every 102 minutes of light **Time of test: 1000 hours**

Sample nr. 248

DECORAL powder coating
DECORAL film 9018/401

Hours: 1000
Initial gloss: 27
Final Gloss: 23
Residual: 85%

ΔE value: 1.77

Sample nr. 246

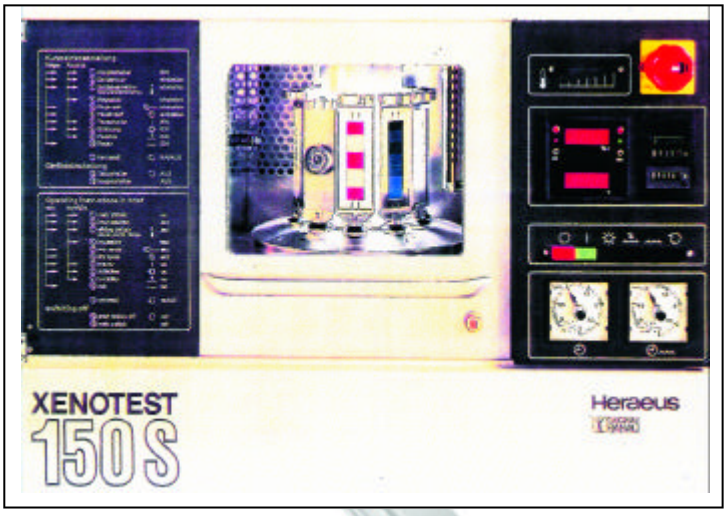
DECORAL powder coating
DECORAL film 9052/902

Hours: 1000
Initial gloss: 27
Final Gloss: 21
Residual: 78%

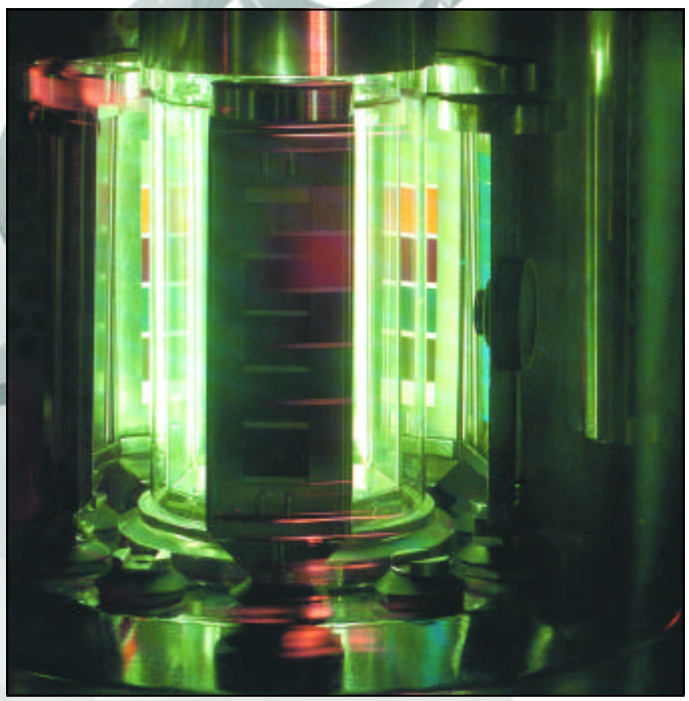
ΔE value: 1.82

XENOTEST 150S

This instrument is used to run the light fastness test. The coated samples together with the specific fabrics of the blue scale, are exposed in the testing chamber under a combination of 1.3 KW xenon lamp vertically positioned. Specific filters and ultrasound humidifying system, capable to recreate extreme conditions of humidity, together with high sunlight conditions.
The test lasts for 1000 hours and closely simulates the real weather conditions in life.
The used specification are according to standard 105-B 02 and DIN54004.
"Tessile di Como" is one of the most prestigious and important Italian laboratory caring out this test and certifying every single DECORAL pattern.



1. Xenotest 150S machine



2. Xenotest 150S test chamber

Sistema Nazionale per l'Accreditamento di Laboratori

CERTIFICATO DI ACCREDITAMENTO

Numero di Accreditamento
0045

Si certifica che

Il **LABORATORIO "TESSILE DI COMO"**
Via Castelnuovo 3 - 22100 Como

è accreditato dal SINAL per l'esecuzione delle prove il cui dettaglio è riportato nelle schede che accompagnano questo certificato e che riportano il numero di accreditamento sopra citato. Le schede possono subire variazioni nel corso del tempo.
L'accreditamento comporta la verifica della competenza tecnica del Laboratorio relativamente alle prove accreditate e del suo Sistema Qualità, in conformità alle prescrizioni della norma UNI CEI EN 45001 e ai criteri applicabili delle norme UNI EN ISO serie 9000.
L'accreditamento resta in vigore fino a **Dicembre 2000** come previsto dalla convenzione stipulata fra il SINAL ed il Laboratorio in oggetto sempre che il Laboratorio conservi la conformità alle prescrizioni del Regolamento Generale e delle regole particolari SINAL applicabili alla fattispecie.

Il Direttore

Il Presidente

Roma, li 17 / 12 / 1996

22100 Como
Via Castelnuovo 3
Tel. 031.268156 / Fax 031.268151
Telex 328459 TESSCO

LABORATORIO ACCREDITATO SINAL n° 0045

Associazione

TESSILE DI COMO

Codice Cliente : 5392/1/1
Codice Richiesta : 981117
N. Bolla Entrata : ESENTE
Data Accettazione : 08/04/98
Data Esecuz. Prove: 16/04/98

Spett.le
VIV DECORAL SRL
VIALE DEL LAVORO, 5
37040 ARCOLE (VR)

C.a. SIG. GIANCARLO FENZI

Tel.: 045/7635072
Fax : 045/7635119

Numero Rapporto Prova
3900 Del 29/05/98

Numero Campione : 98002560

DESCRIZIONE : N.01 CAMPIONE ALLUMINIO
CONTRASSEGNATO : G 6808 - CILIEGIO
DESTINAZIONE D'USO: arredamento + architettura

PROVETTE RESE IN ALLEGATO

RAPPORTO DI PROVA

I risultati delle prove si riferiscono esclusivamente al campione esaminato. E' vietata la riproduzione in forma parziale senza precisa autorizzazione da parte del Laboratorio del Tessile di Como e, per quanto applicabile, del Sinal.

PROVA	U MIS	RISULTATO

20215 SOLIDITA' ALLA LUCE ARTIFICIALE
Metodo: UNI 7639/89 - METODO 2
Strumento: XENOTEST 150 S
DEGRADAZIONE DEL COLORE: indice 8
NOTA : -

Il metodo UNI 7639/89 utilizzato per l'esecuzione della prova corrisponde al metodo ISO 105 B02/94 .

\- .

Il Responsabile del Servizio
(Area Chimica - P.I. G. Baglio)
(Area Tessile - P.I. L. Rampoldi)

Il Consulente Tecnologico
(Prof. Mario Frigerio)

per il Presidente C.C.I.A.A.
(Dr. Fabio Saibene)

SERVIZIO PER LA STAGIONATURA E L'ASSAGGIO DELLA SETA ED ALTRI TESSILI

Campione N. 98002560 NUM. RAPPORTO PROVA : 3900 del 29/05/98 PAG. N. 1 di 1

Soci Promotori:
Unione Industriali di Como, Camera di Commercio di Como
Amm. Provinciale di Como, Comune di Como
Ass. Serica Italiana, Ass. Nobilitazione Tessile
Ass. Italiana Artigiani Fotoincisori, Ass. Italiana Disegnatori

Camera di Commercio Industria Artigianato e Agricoltura di Como

Servizio Pubblico Stagionatura ed Assaggio Seta ed altri Tessili D.M. 22 Dicembre 1988

22100 Como
Via Castelnuovo 3
Tel. 031.268156 / Fax 031.268151
Telex 328459 TESSCO

LABORATORIO ACCREDITATO sinal n° 0045

Associazione

TESSILE DI COMO

Codice Cliente : 5392/1/1
Codice Richiesta : 981117
N. Bolla Entrata : ESENTE
Data Accettazione : 08/04/98
Data Esecuz. Prove: 16/04/98

Spett.le
VIV DECORAL SRL
VIALE DEL LAVORO, 5
37040 ARCOLE (VR)

C.a. SIG. GIANCARLO FENZI

Tel.: 045/7635072
Fax : 045/7635119

Numero Rapporto Prova
3904 Del 29/05/98

Numero Campione : 98002564

DESCRIZIONE : N.01 CAMPIONE ALLUMINIO
CONTRASSEGNATO : 302 - 6808 - ROVERE
DESTINAZIONE D'USO: arredamento + architettura

PROVETTE RESE IN ALLEGATO

RAPPORTO DI PROVA

I risultati delle prove si riferiscono esclusivamente al campione esaminato. E' vietata la riproduzione in forma parziale senza precisa autorizzazione da parte del Laboratorio del Tessile di Como e, per quanto applicabile, del Sinal.

PROVA	U MIS	RISULTATO

20215 SOLIDITA' ALLA LUCE ARTIFICIALE
Metodo: UNI 7639/89 - METODO 2
Strumento: XENOTEST 150 S
DEGRADAZIONE DEL COLORE: indice 8
NOTA : -

Il metodo UNI 7639/89 utilizzato per l'esecuzione della prova corrisponde al metodo ISO 105 B02/94 .

-

Il Responsabile del Servizio
(Area Chimica - P.I. G. Baglio)
(Area Tessile - P.I. L. Rampoldi)

Il Consulente Tecnologico
(Prof. Mario Frigerio)

per il Presidente C.C.I.A.A.
(Dr. Fabio Saibene)

Campione N. 98002564 NUM. RAPPORTO PROVA : 3904 del 29/05/98 PAG. N. 1 di 1

CORROSION TESTS

Corrosion spreads under the paint starting from an exposed part of the metal, in two different ways:
1) Under-layer corrosion with bubbles (Scab corrosion)
2) Filiform corrosion

The following test are used to simulate the weather conditions which causes these kinds of corrosion.

Filiform corrosion

Scab Corrosion

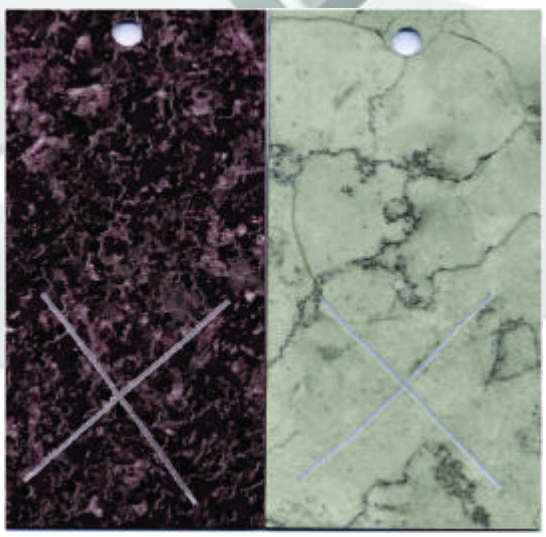
Salt spray test

In this test, the samples after being “cross cut” are exposed inside the salt spray test machine for 1000 hours in high humidity and corrosion conditions.
This test is carried out to check the correct pretreatment on aluminum samples, according to DIN 50017 standard.
When the test is completed, there must be no visible corrosion higher than 1 mm from the cut.

Kesternich spray test

Nowaday, sulphur dioxide is one of the most highly polluting factor and is present in high quantities, especially in industrial areas.
The purpose of this test is to determine the resistance of paints to corrosion produced by this polluting factors, according to EN ISO 3231 standard.

Salt-spray test machine



Samples submitted to Kesternich Test

CHEMICAL AND CORROSION RESISTANCE TESTS

Machu test.

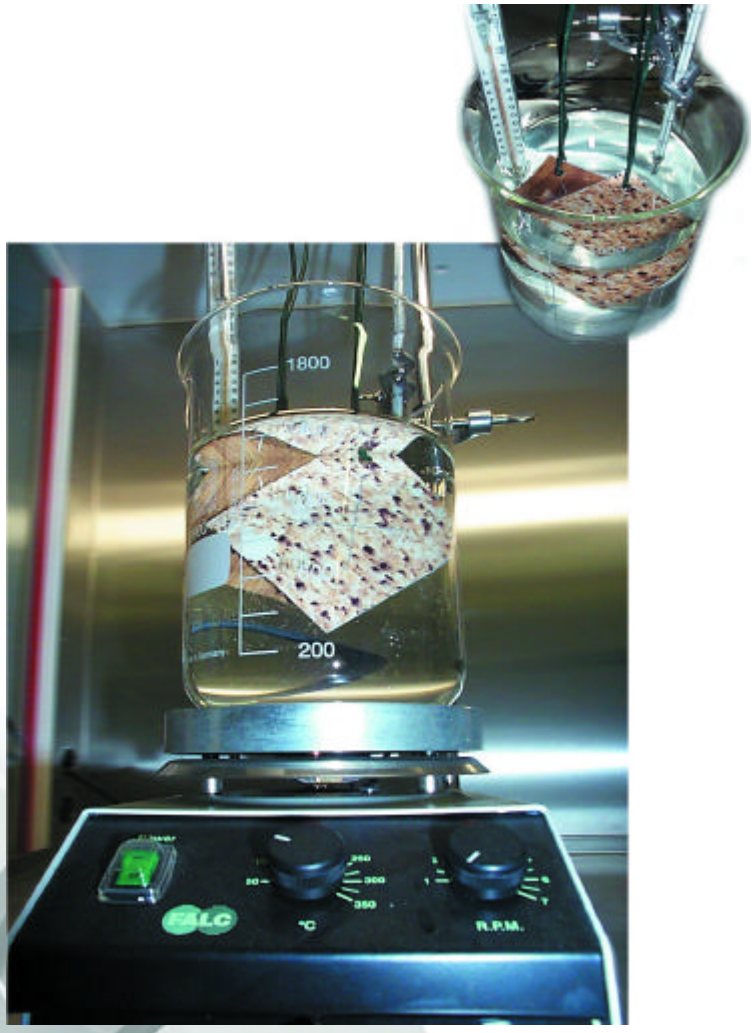
The test, as per Qualicoat specifications, consists in deeping the coated samples (on which a 1 mm cross cut incision is made) into a liquid solution of sodium chloride, acetic acid and hydrogen peroxide, with PH of 3.0-3.3 for 48 hours at 37°C.
At the end of the test there must be no infiltration exceeding 0.5 mm on both size of the scratch.
The test is necessary to check if pretreatment has been correctly executed.
This test is an accelerated version of salt spray test.

Pressure cooker test.

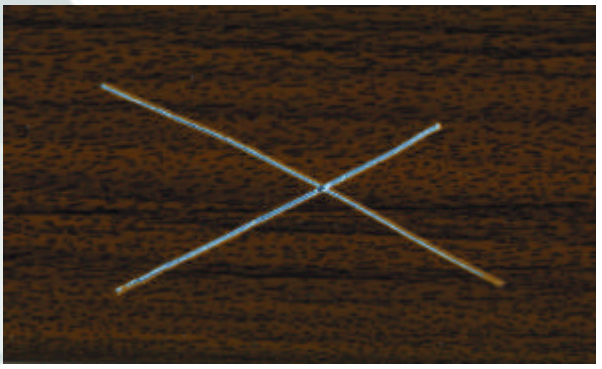
This test, as per Qualicoat specifications, checks the adhesion of the coating on the metal and consists in deeping the coated samples into boiling demineralised water having a pressure of 1 bar for about 1 hour. Therefore the coated samples are exposed by two factors: pressure and high temperature.
When the test is completed, the paint should not have any blistering or detachment.
This test is an accelerated version of salt spray test.

Resistance to salt-spray test.

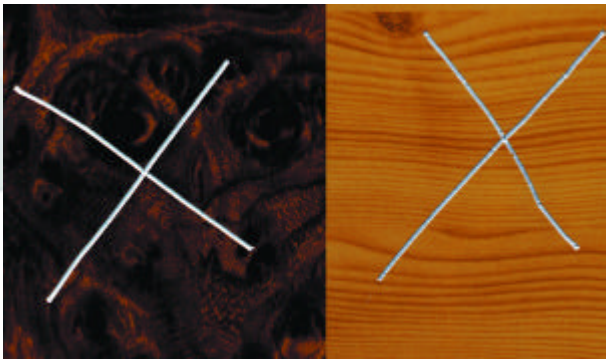
The test simulates the conditions of the seaside environment which cause corrosion.
The coated samples (on which a 1 mm cross cut incision is made) are placed in contact with a solution of sodium chloride and acetic acid to simulate the marine environment.
As per Qualicoat specifications the maximum accepted infiltration is 16 mm^2 over a scratch length of 10 cm but the length of any single infiltration must not exceed 4 mm.
The test is carried out according to standard ISO9227 and Qualicoat specifications for 1000 hours.



Machu Test.




Pressure cooker.


Resistance to salt-spray test.

PHYSICAL AND CHEMICAL CHARACTERISTICS OF “DECORAL” COATING APPLIED ON ALUMINIUM PROFILES FOR ARCHITECTURAL USE

The DECORAL process has been developed to be applied on different application fields such as architectural, furniture and transport industries.

That is why DECORAL powders have been studied to resist to the most aggressive chemical products, such as solvents, acids etc.

Using Xilene, Aceton of a 1:1 mixture of Aceton/Ethyl Acetate and Aceton/Ethanol the DECORAL products can be easily cleaned from indelible marker and varnish applied with spray (graffiti).

List of the principal chemical resistance

- Normal petrol	25°C x 60’ : unaffected
- Unleaded petrol	25°C x 60’ : unaffected
- Gasoline	25°C x 60’ : unaffected
- Ethanol	25°C x 5’ : unaffected
- 1:1 Mixture of Acetone and Ethyl acetate	25°C x 5’ : unaffected
- Mobil break fluid	25°C x 5’ : unaffected
- Metylketone: 10 strokes with cotton wad	25°C : unaffected
- Acetone: 10 strokes with cotton wad	25°C : unaffected
- HCl 0,1 N	60°C x 4h : unaffected
- NaOH 0,1 N	60°C x 4h : unaffected

ANTI GRAFFITI TEST

sample coated with a cycle 8 base and after then decorated

marked with a black indelible pen type Pentel Pen N50

after 48 hours th samples is partially cleaned by a mixture 1:1 of Metileticheton and denaturated alchool

sample coated with a cycle 7 base and after then decorated

varnished with coachbuilder's paint through a spray cylinder

after 48 hours cleaned with a mixture 1:1 of Metiletilcheton and denaturated alchool

MECHANICAL TEST PERFORMANCES

The quality of a good powder coating is related to the following characteristics:
1. Hardness
2. Elasticity
3. Adhesion

The mechanical tests are necessary to check these three properties and are important as a complement to the durability mentioned in this book.
These tests should refer each time to the final utilization; for example a paint for a product which should be bend after coating will need more elasticity than a paint for external architectural application where hardness is more important.
We have anyway to consider that temperature may influence the elasticity and hardness features of the paint.
The methods used to determine each property are different, because each test measure a specific characteristic of the paint.
This is why the evaluation of the examined property comes out from the average of different tests as specified in the following diagram.

Property	Test	Emphasized characteristics	Standards	
			national	international
Hardness	Persoz pendulum	Time needed for the damping of the oscillations on the surface of a coated sample		ISO-1522
	Konig pendulum		DIN-53157	
	Buchholz	Resistance to the penetration of a semicircular sharp blade	DIN-5153	ISO-2815
	Pencil	Resistance to the engraving using a point which makes an indentation pushing it on the surface	ASTM-D-3363	
	Abrasion	Resistance to the rubbing using abrasives	ASTM-D-968 ASTM-D-658	
Elasticity	Direct impact test Inversed impact test	Resistance to a quick impact	ASTM-D-2794	
	Cupping test	Resistance of the coating to a slow deformation of the support	DIN-53156	ISO-1520
Adhesion	Conic mandrel Cylindrical mandrel	Resistance of the coating to the traction when we bend the support	ASTM-D-522 ASTM-D-1737	
	Cross-cut test	Resistance of the detachment of powder coating after the cross-cut test	DIN-53151	ISO-2409

1 Cupping test

2 Impact Test

3 Sawing / Drilling

4 Bending test

Coating layer appearance, gloss, thickness
The coating layer has to full cover the item and without any scratch or defect visible from a distance of 3 meters.
The gloss has to be measured with a 60° angle light and the thickness should be minimum 60 microns.

Cupping test / Impact Test / Bend test
The elasticity of the coating layer is measured by a range of tests causing a mechanical deformation of the surface.
The tests give results concerning the adhesion quality of the coating layer on the metal.
The cupping test (fig.1-carried out according to EN ISO 1520 standards), doesn't have to cause any cracking or detachment on the coated surface, at a minimum 5 mm height as per Qualicoat specifications.
The impact test (fig.2- carried out according to ASTM D2794 standards) doesn't have to cause any cracking or detachment on the coated surface where the flat sheet is submitted to a undirect impact using an energy of 2,5 Nm. The bend test (fig.4 - carried out according to EN ISO1519 standards) doesn't have to cause any cracking or detachment on the coated surface after bending using a 5 mm diameter cilindric mandrel.

All The mechanical tests have to be carried out on coated panel sheets having 1mm thickness.

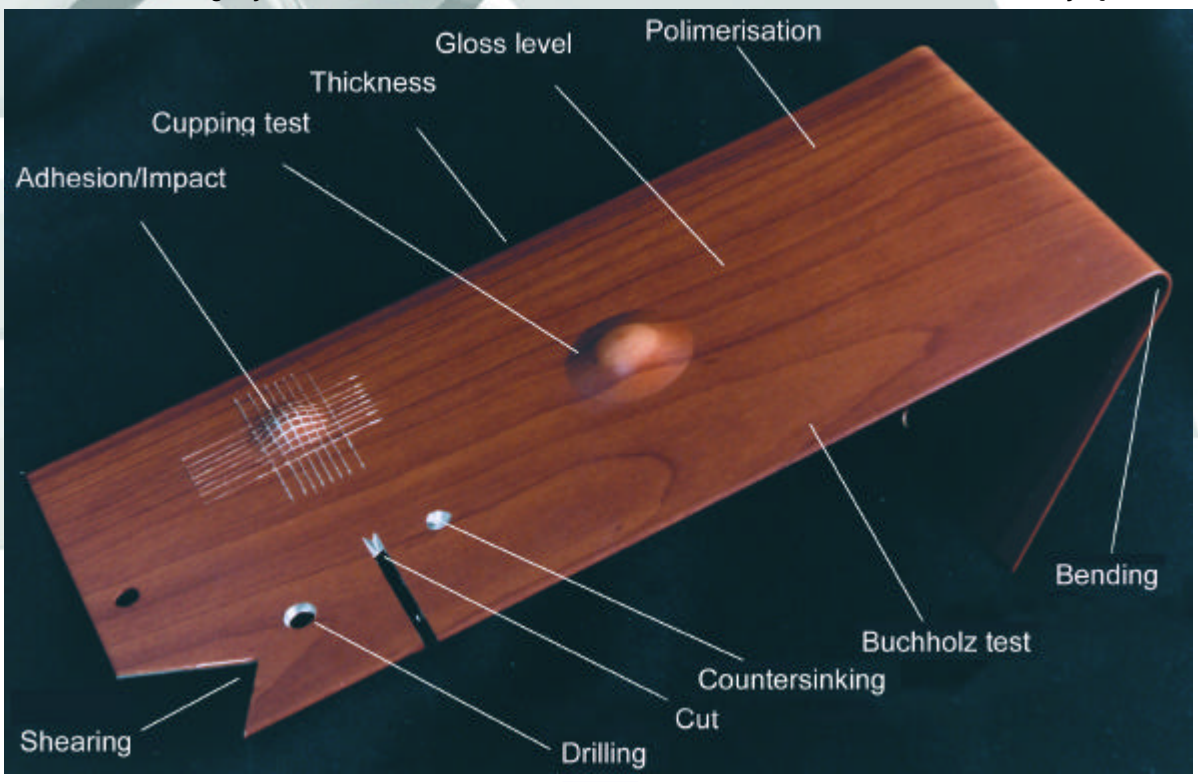
Adhesion test
The aim of this test is to determine the adhesion of the coating layer to the metal support.
For the adhesion test is necessary to do some cross cut incision using a cutter
The space between each scratch should be 2 mm for thicknesses between 60 and 120µm.
We have now to apply over the grid a specific tape that has to be pulled off sharply and there should not be any detachment on the coating layer.

Sawing / Countersinking / Drilling / Cutting test
Sawing, countersinking, drilling, cutting instruments (fig. 3) are used to determine the powder coating layer resistance.
The purpose of these tests is to simulate the real mechanical tooling on the aluminum during its fabrication.
These tests are always processed according to Qualicoat specifications.

Buchholz test
The Buchholz test determines the coating layer hardness and follows the ISO 2815 standard.
The test consists in laying on the powder coated surface a 500 grams blading instrument.
The powder coating hardness is measured according to the length of the cut produced by the blade.

Solvent test for polymerization
The solvent test for polymerization consists in deeping a sponge into Xilene liquid and wipe it 30+30 times on the powder coating layer.
If at the end of this test the layer is matt, soft and easily removable, the test is failed and this means that the coating layer hasn't polymerized in the proper way.

The advised coating layer thickness for the mechanical tests is as the minimum indicated by Qualicoat.



NATURAL EXPOSURE TESTS

1

2

3

1. Natural exposure in Arcole (VR) - Italy
2. Natural exposure in Fusina (VE) - Italy
3. Natural exposure in Miami - USA

Outdoor exposure tests

The natural exposure tests are carried out in outdoor stations. The location of these stations throughout the world is carefully studied and selected.
In selecting the locations, the following parameters were taken into consideration: micro and macro climates and the environment atmosphere.
For example, the cold artic areas and the mountain environment are the least severe, while the tropical areas and the city-marine environment are the most severe for painting products.

Natural tests

The real outdoor exposure tests are the reference point of all the tests and should always be considered as the most important ones.
No machine, however perfect, will ever fully reproduce real outdoor conditions.
The ISO 2810 standard establishes how natural outdoor exposure should be carried out.
The natural exposure tests can be divided into two large categories:
- corrosion resistance tests
- coating layer resistance tests

Corrosion resistance

The following are the main corrosion factors:
- humidity
- atmospheric pollution
- salt

As the test consists simply of exposing the coated samples for a fixed period of time, the most important thing is to identify the exposure locations that contain these factors.
Experience has shown that the most severe environments are marine and industrial. As result, a place combining industrial and sea environments is the best natural corrosion test.

Resistance of coating layer

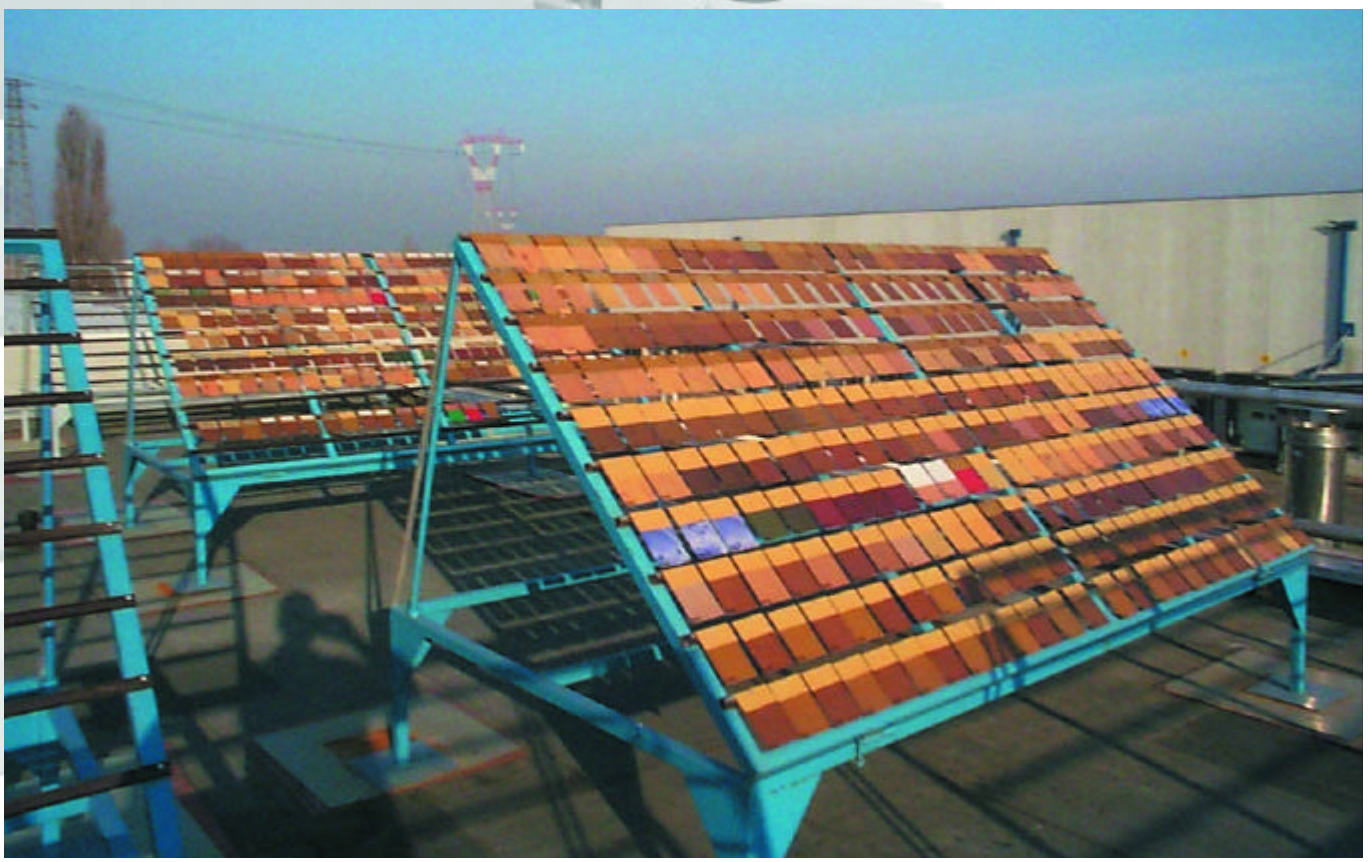
In natural exposure, the elements taken into consideration to establish the durability of coating products are colour change and loss of gloss.
The most suitable place for natural exposure is Florida, as it has the worldwide highest rate of UV rays, dry heat during the day and humid cold at night.
For this reason Qualicoat has chosen Florida as the best natural exposure location for powder coating.

NATURAL EXPOSURE TESTS
IN ARCOLE (VERONA- ITALY)

ARCOLE'S WEATHER CONDITIONS:

Urban-Industrial environment
Northern Italian climate.

Natural Exposure in Arcole



DECORAL SAMPLES EXPOSED IN ARCOLE (VERONA) - ITALY

SAMPLE NR. 208

EXPOSURE DATE: 04/04/00

CHECK DATE: 03/09/01

THICKNESS: 77 MICRONS

INITIAL GLOSS: 23 G

FINAL GLOSS: 23 G

ΔE: 1,2

SAMPLE NR. 207

EXPOSURE DATE: 04/04/00

CHECK DATE: 03/09/01

THICKNESS: 81 MICRONS

INITIAL GLOSS: 21 G

FINAL GLOSS: 20 G

ΔE: 0,9

SAMPLE NR. 200

EXPOSURE DATE: 04/04/00

CHECK DATE: 03/09/01

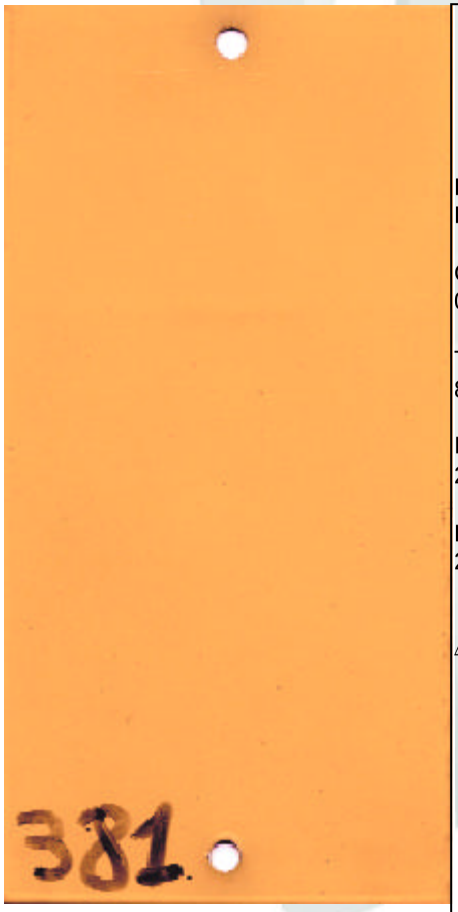
THICKNESS: 93 MICRONS

INITIAL GLOSS: 18 G

FINAL GLOSS: 18 G

ΔE: 1,3

DECORAL SAMPLES EXPOSED IN ARCOLE (VERONA) - ITALY



SAMPLE NR. 381

EXPOSURE DATE: 04/04/00

CHECK DATE: 03/09/01

THICKNESS: 80 MICRONS

INITIAL GLOSS: 21 G

FINAL GLOSS: 20 G

ΔE: 0,5

SAMPLE NR. 383

EXPOSURE DATE: 04/04/00

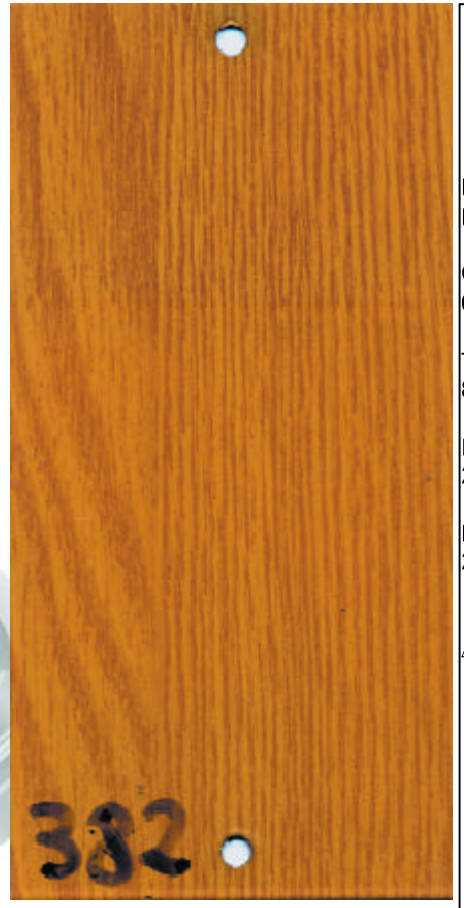
CHECK DATE: 03/09/01

THICKNESS: 92 MICRONS

INITIAL GLOSS: 23 G

FINAL GLOSS: 23 G

ΔE: 0,7



SAMPLE NR. 382

EXPOSURE DATE: 04/04/00

CHECK DATE: 03/09/01

THICKNESS: 85 MICRONS

INITIAL GLOSS: 20 G

FINAL GLOSS: 20 G

ΔE: 1,1

Decoral System Srl
Laboratorio

Viale del Lavoro, 5
37040 Arcole (VR)
Tel: 045 7639135
Fax: 045 7639190
e-mail pandolfi@viv.it

Accreditamento N° 479

Finitura effetto legno : PINO 304

Materie Prime:

Prodotto verniciante	DS 402	Licenza Qualicoat P-506	Numero Rapporto 2862
Disegno	9060/401 9060/201	Licenza Qualital Allegato 1	Numero Rapporto 3235

Condizioni di preparazione del campione secondo procedura interna PO-15-12:

Prodotto verniciante cotto 20 minuti a 200 °C (sul metallo)
Decorazione fino a 200° C (sul metallo)

Campione 4750

Riportiamo il risultato del campione a lato dopo 1 anno esposizione in Florida secondo la norma ISO 2810:1974:

Campione DS 402 + 9060/401-201

Periodo di esposizione = 1 Anno (dal 19-04-03 al 19-04-04)
Residuo percentuale di brillantezza = **83 %** (limite 50 %)
Variazione di colore sull'effetto legno ΔE =**0.68**

Risultati Rapporto 2862 (06-05-2003) Lab. Qualital
Campione DS 402 (senza decoro)

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **83 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **0.7** (limite = 2)

Risultati Rapporto 3235 (19-03-04) Lab. Qualital
Campione DS 402 + 9103/401-201

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **85 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **0.7**

Responsabile prove
Dr. Pandolfi Cristian

Responsabile Laboratorio
Sig. Fenzi Giancarlo

GARANZIA DELLA QUALITA' DEL PRODOTTO
MATERIE PRIME COPERTE DA POLIZA RC PRODOTTO

Decoral System Srl
Laboratorio

Viale del Lavoro, 5
37040 Arcole (VR)
Tel: 045 7639135
Fax: 045 7639190
e-mail pandolfi@viv.it

Accreditamento N° 479

Finitura effetto legno : PINO 319

Materie Prime:

Prodotto verniciante	DS 402	Licenza Qualicoat P-506	Numero Rapporto 2862
Disegno	9103/401 9103/201	Licenza Qualital Allegato 1	Numero Rapporto 3235

Condizioni di preparazione del campione secondo procedura interna PO-15-12:

Prodotto verniciante cotto 20 minuti a 200 °C (sul metallo)
Decorazione fino a 200° C (sul metallo)

Campione 4755

Riportiamo il risultato del campione a lato dopo 1 anno esposizione in Florida secondo la norma ISO 2810:1974:

Campione DS 402 + 9103/401-201

Periodo di esposizione = 1 Anno (dal 19-04-03 al 19-04-04)
Residuo percentuale di brillantezza = **88 %** (limite 50 %)
Variazione di colore sull'effetto legno ΔE = **1.82**

Risultati Rapporto 2862 (06-05-2003) Lab. Qualital
Campione DS 402 (senza decoro)

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **83 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **0.7** (limite = 2)

Risultati Rapporto 3235 (19-03-04) Lab. Qualital
Campione DS 402 + 9103/401-201

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **83 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **0.89**

Responsabile prove
Dr. Pandolfi Cristian

Responsabile Laboratorio
Sig. Fenzi Giancarlo

GARANZIA DELLA QUALITA' DEL PRODOTTO
MATERIE PRIME COPERTE DA POLIZA RC PRODOTTO

Decoral System Srl
Laboratorio

Viale del Lavoro, 5
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Tel: 045 7639135
Fax: 045 7639190
e-mail pandolfi@viv.it

Accreditamento N° 479

Finitura effetto legno : NOCE

Materie Prime:

Prodotto verniciante	DS 403	Licenza Qualicoat P-506	
Disegno	9104/405 9104/205	Licenza Qualital Allegato 1	Numero Rapporto 3266

Condizioni di preparazione del campione secondo procedura interna PO-15-12:

Prodotto verniciante cotto 20 minuti a 200 °C (sul metallo)
Decorazione fino a 200° C (sul metallo)

Campione 4736

Riportiamo il risultato del campione a lato dopo 1 anno esposizione in Florida secondo la norma ISO 2810:1974:

Campione DS 403 (ex Lab 205) + 9104/405-205 (ex 1049/405)

Periodo di esposizione = 1 Anno (dal 19-04-03 al 19-04-04)
Residuo percentuale di brillantezza = **79 %** (limite 50 %)
Variazione di colore sull'effetto legno ΔE = **1.89**

Risultati Rapporto 3266 (11-05-04) Lab. Qualital
Campione DS 403 (ex lab 205) + 9104/405-205 (ex 1049/405)

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **71 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **1.3**

Responsabile prove
Dr. Pandolfi Cristian

Responsabile Laboratorio
Sig. Fenzi Giancarlo

GARANZIA DELLA QUALITA' DEL PRODOTTO
MATERIE PRIME COPERTE DA POLIZA RC PRODOTTO

Decoral System Srl
Laboratorio

Viale del Lavoro, 5
37040 Arcole (VR)
Tel: 045 7639135
Fax: 045 7639190
e-mail pandolfi@viv.it

Accreditamento N° 479

Finitura effetto legno : RADICA D

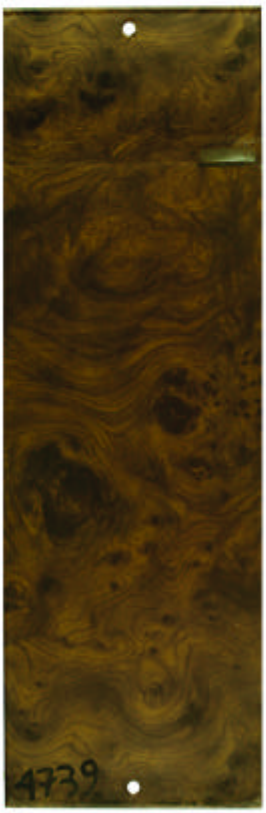
Materie Prime:

Prodotto verniciante	DS 401	Licenza Qualicoat P-506	Numero Rapporto 2862
Disegno	9154/404 9154/204	Licenza Qualital Allegato 1	Numero Rapporto 3266

Condizioni di preparazione del campione secondo procedura interna PO-15-12:

Prodotto verniciante cotto 20 minuti a 200 °C (sul metallo)
Decorazione fino a 200° C (sul metallo)

Campione 4739



Riportiamo il risultato del campione a lato dopo 1 anno esposizione in Florida secondo la norma ISO 2810:1974:

Campione DS 401 + 9154/404-204

Periodo di esposizione = 1 Anno (dal 19-04-03 al 19-04-04)
Residuo percentuale di brillantezza = **64 %** (limite 50 %)
Variazione di colore sull'effetto legno ΔE = **2.84**

Risultati Rapporto 2862 (06-05-2003) Lab. Qualital
Campione DS 401 (senza decoro)

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **67 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **1.33** (limite = 4)

Risultati Rapporto 3266 (11-05-04) Lab. Qualital
Campione DS 401 + 9154/404-204

Invecchiamento accelerato secondo norma UNI EN ISO 11341:2000
Residuo percentuale Brillantezza = **71 %** (limite = 50 %)
Variazione di colore sull'effetto legno ΔE = **1.59**

Responsabile prove
Dr. Pandolfi Cristian

Responsabile Laboratorio
Sig. Fenzi Giancarlo

GARANZIA DELLA QUALITA' DEL PRODOTTO
MATERIE PRIME COPERTE DA POLIZA RC PRODOTTO

Natural Exposure test

EXPOSURE STATION FOR NATURAL AGEING TEST LOCATED IN FUSINA (VENICE - ITALY)

ENVIRONMENTAL CHARACTERISTICS: INDUSTRIAL-SEA ATMOSPHERE

- POLLUTING AGENTS WHICH ARE PRESENT IN THE AIR, WHERE THE SAMPLES ARE EXPOSED (HOUR AVERAGE DURING ONE YEAR)

SO_2	2-24 microgr./Nmc (average 18) tops 70-130 microgr./Nmc (average of the tops 94)
NO_2	86-180 microgr./Nmc (average 135)
Powders	57-93 microgr./Nmc (average 74) tops 126-185 (average 148)
Ozone	43 microgr./Nmc as annual average with a maximum of 288 on hour average

These data have been pbtained with different methods and equipment, according to evalutations in full respect of law.

- annual average of humidity: 95%

FUSINA - VENICE - ITALY

Commission of the European Communities
Directorate - General XII for Science, Research and Development
Industrial and Materials Technologies
Brite-EuRam II - CRAFT Scheme

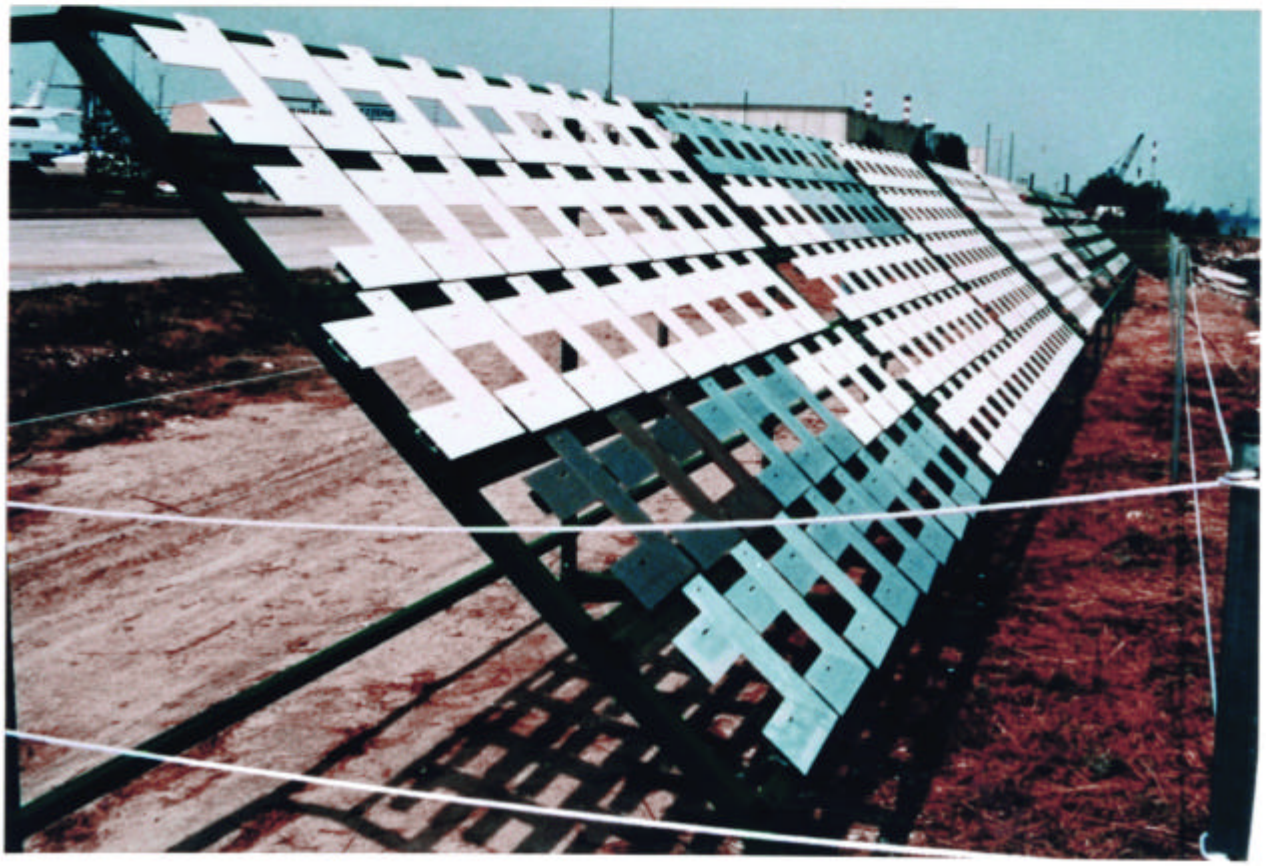
Proposal CR - 1004 . 1 - 91: Development of new coating systems on aluminium to prevent corrosion, particularly filiform corrosion

SME - Partners

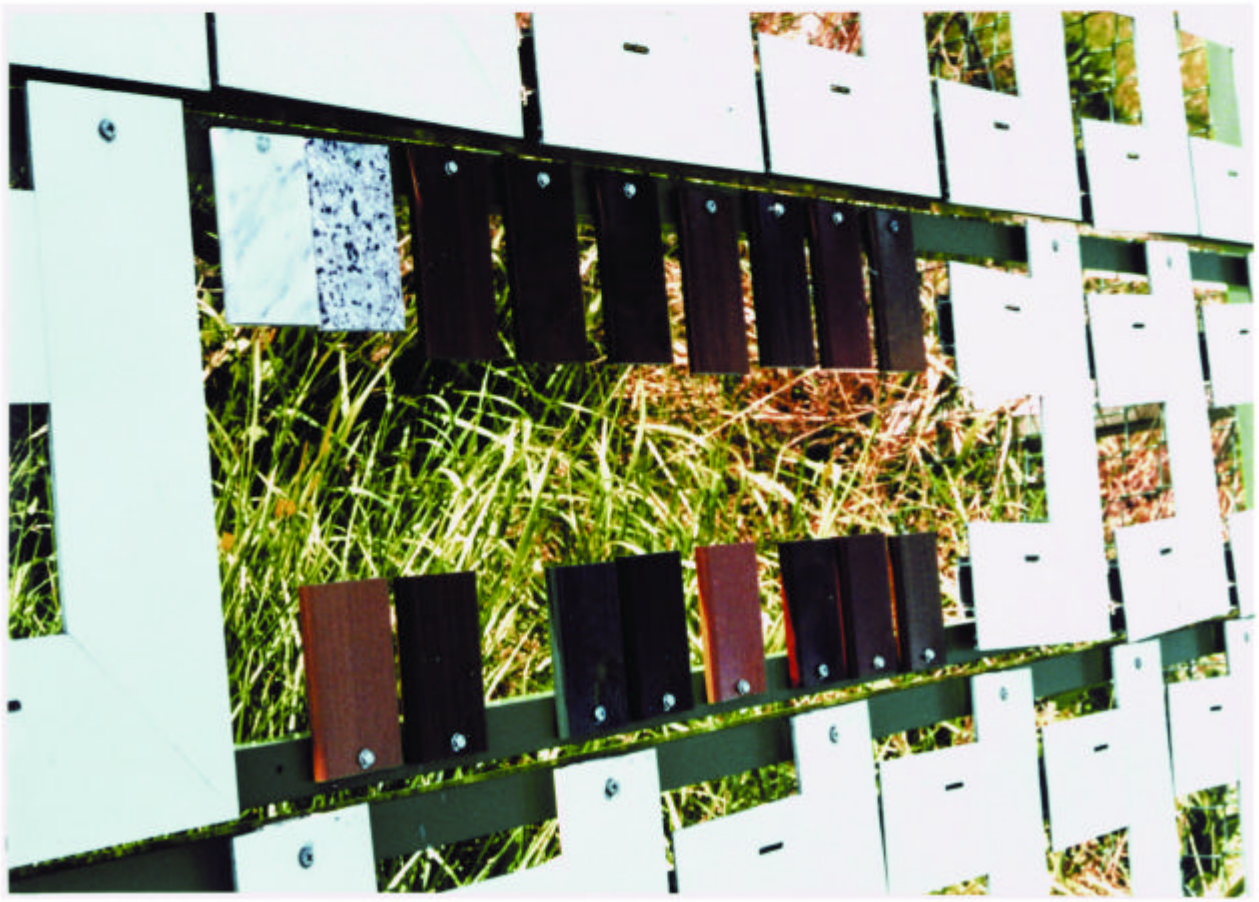
Gebr. Schneider, Fensterfabrik; 74597 Stimpfach; Germany; prime proposer
ALSAN Alvarez Schaer S.A., 46988 Paterna Valencia; Spain
Weert Groep BV; 6039 Stramproy, Netherland
Vestjysk Industrilakering A/S; 6900 Skjern; Denmark
Velfac International A/S; 6950 Ringkobing, Denmark
Verniciatura Industriale Veneta, 37030 Cazzemo di Tramigna (VR); Italy

R&D - Performer

Forschungsinstitut für Edelmetalle und Metallchemie; 73525 Schwäbisch Gmünd; Germany



FUSINA - VENICE - ITALY

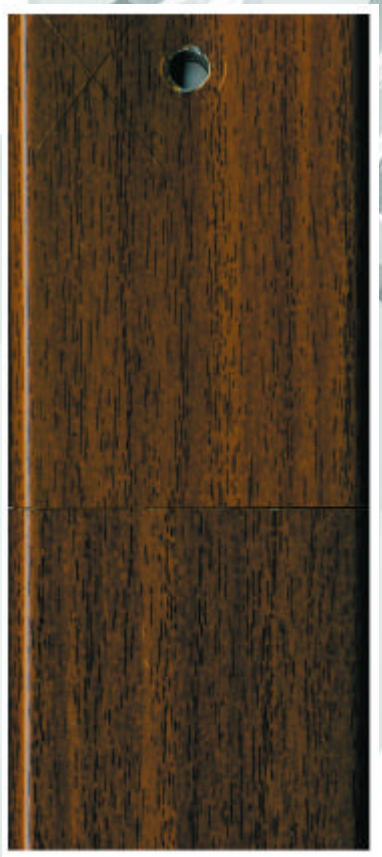


Exposure station for natural ageeing test in Fusina (Venice)
Samples made end of 1995 and exposed for 1 year in industrial-marine atmosphere

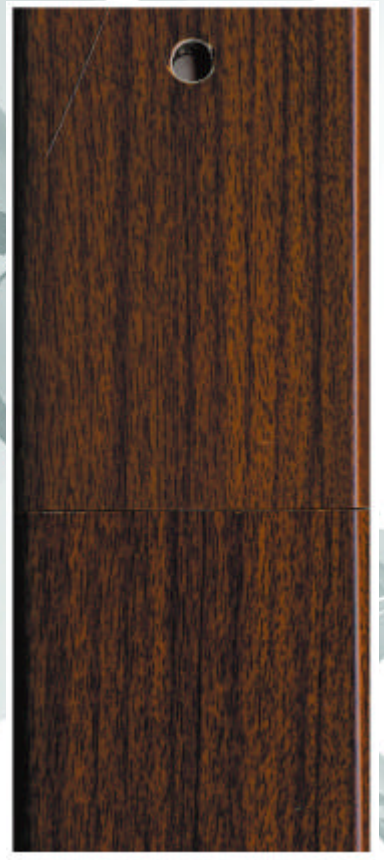
Campioni esposti
exposed samples

Campioni non esposti di riferimento

reference unexposed samples



A7 - ACACIA



B7 - NOCE

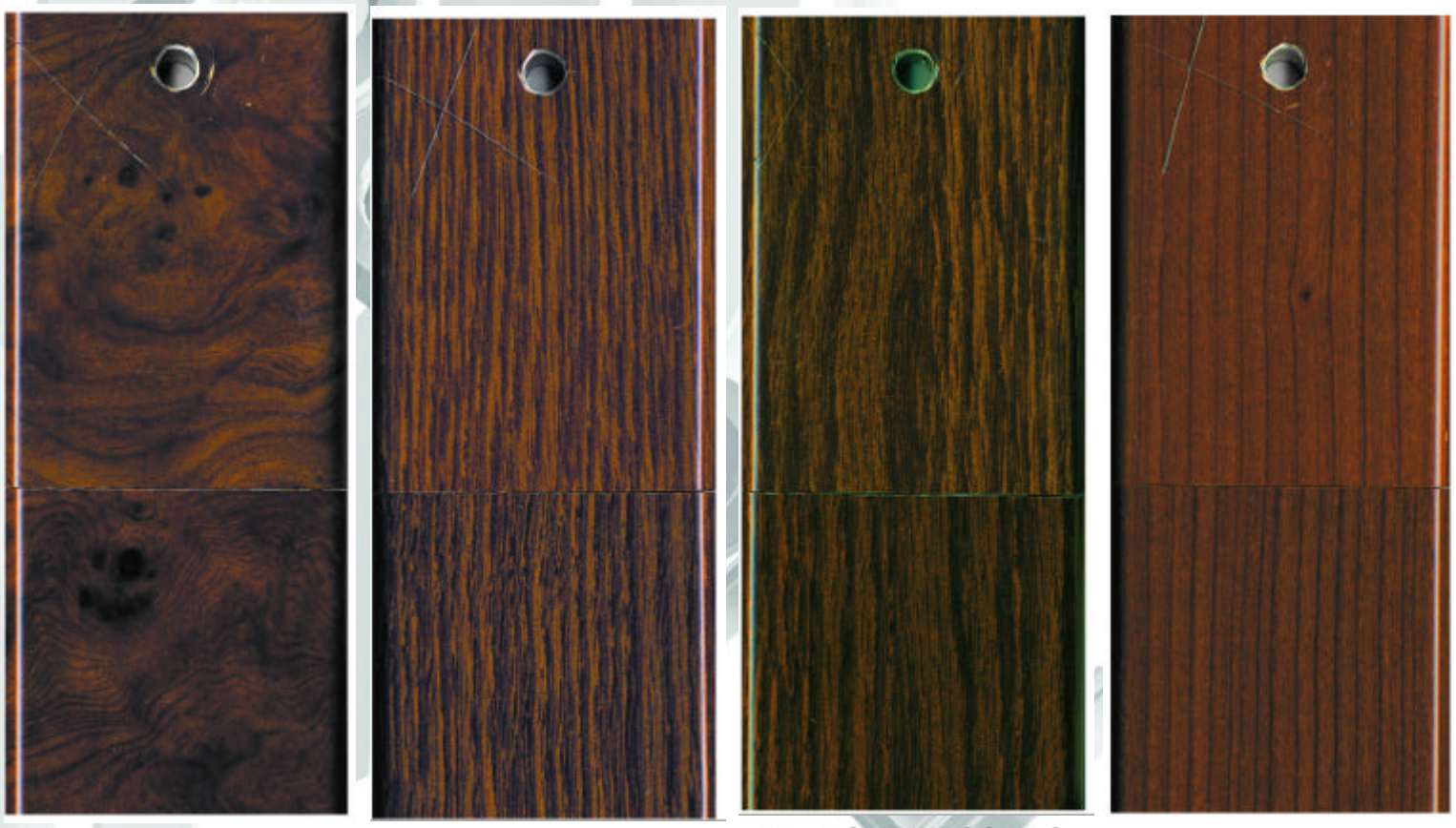
C7 - RADICA CHIARA

Exposure station for natural ageeing test in Fusina (Venice)
Samples made end of 1995 and exposed for 1 year in industrial-marine atmosphere

Campioni esposti
exposed samples

Campioni non esposti di riferimento

reference unexposed samples



D7 - RADICA SCURA | E7 - ROVERE CHIARO | F7 - ROVERE SCURO | G7 - CILIEGIO

ATLAS
MATERIAL TESTING SOLUTIONS

SOUTH FLORIDA TEST SERVICE
17301 Okeechobee Road
Miami, Florida 33018 USA

Phone: (305) 824-3900
Fax: (305) 362-6276

October 24, 2000

Ms. Emiliana Godi
VERNICIATURA INDUSTRIALE VENETA S.P.A.
37030 Cazzano Di Tramigna
Verona - Localita, Costeggiola Italy

Ref.: Test No. FS13975
PO No.: No Ref.; Letter Dated 03/27/2000

Dear Ms. Godi:

The following materials have been returned to you.

Numbers: 42 Regular Panels

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42		

Radiant exposure: 3,477.70 MJ/m²; 83,119 Langleys
162.05 MJ/m² (295-385 nm)
Test Method: ASTM G 147 Jul 96
ASTM G 7 Jul 97
Type of test: DIRECT 5 DEG SOUTH, OPEN BACK
Location: Exposed in Miami, Florida
Exposure Period: April 24, 2000 to October 24, 2000
Next return: 12.00 months
Number remaining:
84 Regular Panels

Observations,Deviations, Waivers and Others:

No Observations,Deviations or Waivers

www.atlaswsg.com

ATLAS
WEATHERING SERVICES GROUP

Florida Climatological Data

Climatological Data Miami, Florida

Latitude:	25°52'N	
Longitude:	80°27'W	
Elevation:	3 meters (10 ft)	
Temperature: °C/°F	Summer	Winter
Average High	34/93	26/79
Average Low	23/73	13/55
Relative Humidity: Annual Mean	78%	
Annual Precipitation: Rain	1685 mm/66 inches	
Solar Radiant Exposure:* Total	6588 MJ/m^2	
UV	280 MJ/m^2	
Distance From Ocean:	27 km (17 miles)	

*Radiant Exposure measured at latitude tilt angle (26° South)

Average Monthly UV and Total Radiant Exposure for Southern Florida (MJ/m^2)

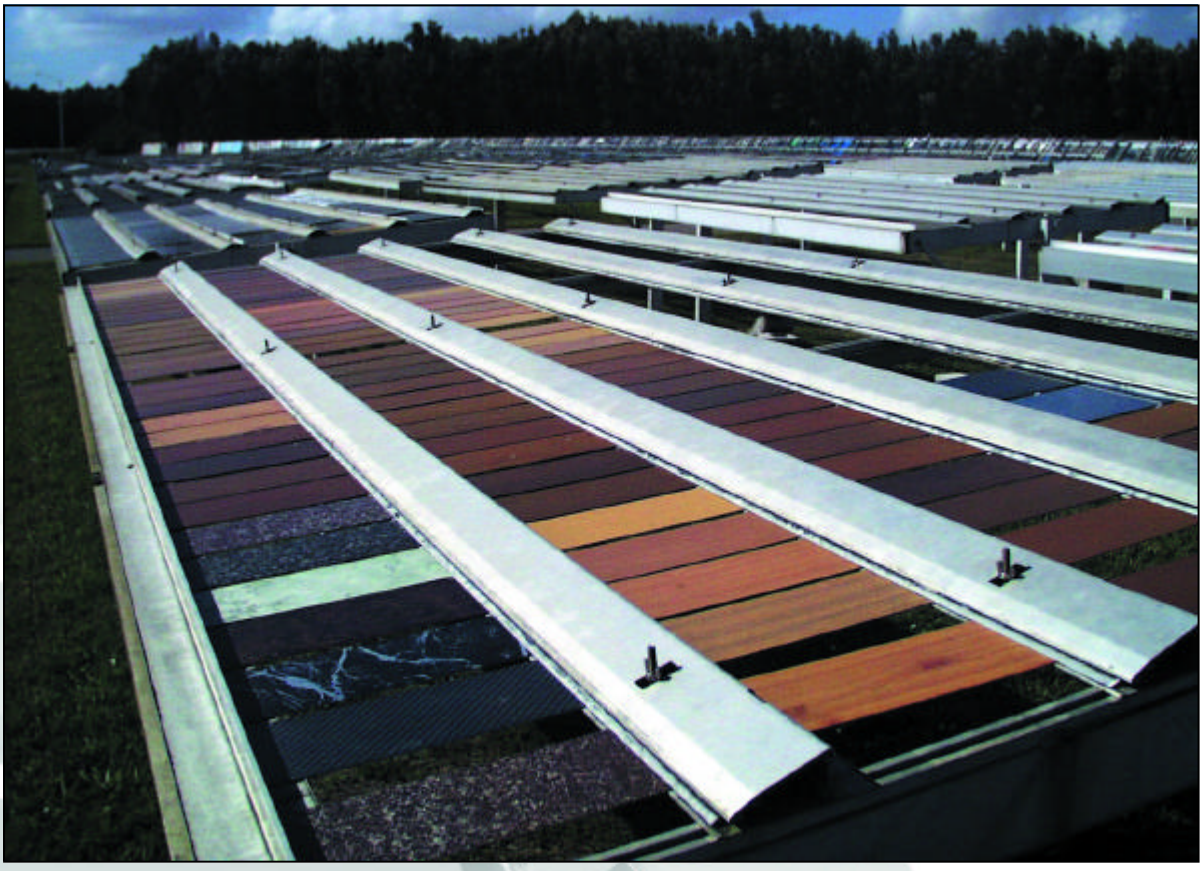
(26° SOUTH)

MONTH	UV**	TOTAL
January	20.0	505
February	22.5	545
March	26.5	618
April	28.0	612
May	28.0	609
June	25.7	543
July	24.7	532
August	24.0	543
September	22.3	540
October	21.7	555
November	18.0	490
December	18.6	496
YEARLY TOTAL	280.0	6588

**below 385 nm wavelength

DECORAL SAMPLE'S EXPOSURE IN FLORIDA

Climatological data as per Atlas certification



FLORIDA NATURAL EXPOSURE - 1 YEAR

Sample nr. 136

Base: DECORAL POWDER
Decoration: DECORAL FILM 9061/401
Exposure beginning: 10/04/01
End of exposure: 10/04/02
Thickness: 61 microns

Gloss Level at the beginning: 18,4
Gloss Level at the end: 17

REMAINING GLOSS: 92%

Sample nr. 207

Base: **NON DECORAL POWDER**
Decoration: DECORAL FILM 9061/401
Exposure beginning: 10/04/01
End of exposure: 10/04/02
Thickness: 67 microns

Gloss Level at the beginning: 21,6
Gloss Level at the end: 5,9

REMAINING GLOSS: 27%

FLORIDA NATURAL EXPOSURE - 1 YEAR

Sample nr. 138

Base: DECORALPOWDER
Decoration: DECORAL FILM 9104/402
Exposure beginning: 10/04/01
End of exposure: 10/04/02
Thickness: 72 microns

Gloss Level at the beginning: 20,7
Gloss Level at the end: 17,3

REMAINING GLOSS: 84%

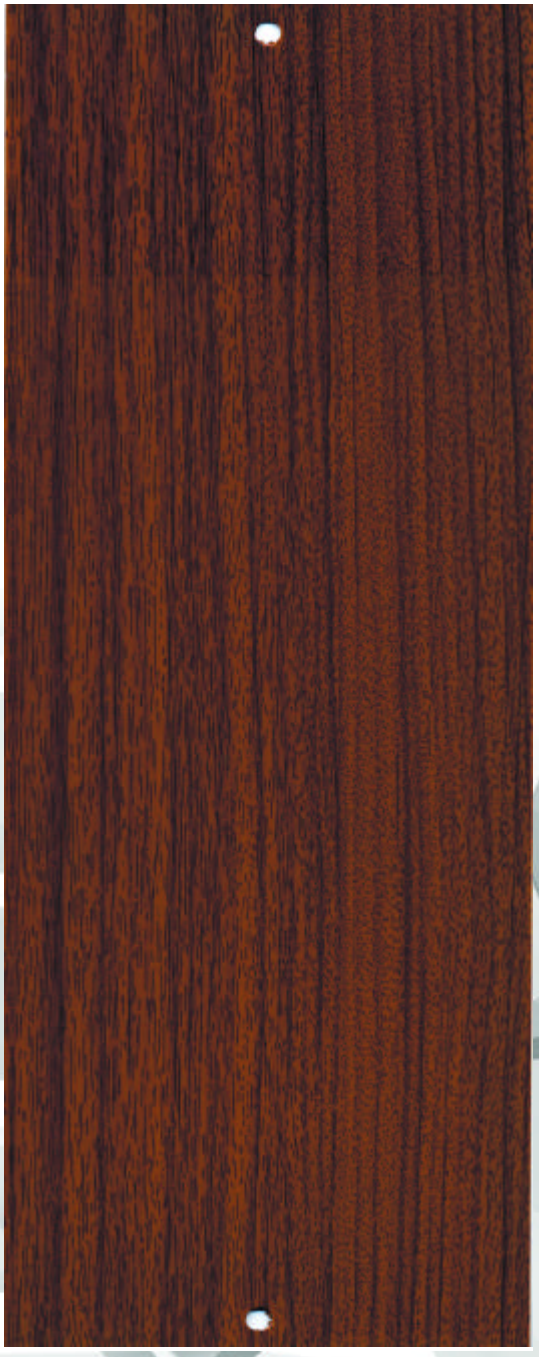
Sample nr. 208

Base: **NON DECORAL POWDER**
Decoration: DECORAL FILM 9104/402
Exposure beginning: 10/04/01
End of exposure: 10/04/02
Thickness: 64 microns

Gloss Level at the beginning: 27,6
Gloss Level at the end: 5,1

REMAINING GLOSS: 18%

FLORIDA NATURAL EXPOSURE - 1 YEAR



Sample nr. 129

Base: DECORALPOWDER
Decoration: DECORAL FILM 9018/401
Exposure beginning: 10/04/01
End of exposure: 10/04/021
Thickness: 74 microns

Gloss Level at the beginning: 13,9
Gloss Level at the end: 13

REMAINING GLOSS: 94%

Sample nr. 205

Base: **NON DECORAL POWDER**
Decoration: DECORAL FILM 9018/401
Exposure beginning: 10/04/01
End of exposure: 10/04/02
Thickness: 66 microns

Gloss Level at the beginning: 27,9
Gloss Level at the end: 6

REMAINING GLOSS: 22%

APPROVAL

for coating materials

The association for quality control in the paint, lacquer and coating industry, abbreviated to **QUALICOAT**, grants an approval on the basis of the inspection report

submitted by (testing laboratory):	**QUALITAL, I-Novara**
Date of issue of the approval:	**30.11.2000**
Period of validity of the approval:	**by 31.12.2004**
for the product:	**Serie PUR TRA C.20-DS "Special finishes", cat. 1 cl. 1**
manufactured by the company:	**Decoral System Srl., I-S. Bonifacio (VR)**
approval number:	**P-0377**

This product may be described and labelled as follows

product tested and approved for the quality mark

and therefore offered to all companies holding the quality label for paint, lacquer and powder coatings on aluminium for architectural applications.

Zurich, 30 November 2003

QUALICOAT

Corrado Baroni
President

Josef Schoppig
General Secretary

APPROVAL

for coating materials

The association for quality control in the paint, lacquer and coating industry, abbreviated to **QUALICOAT**, grants an approval on the basis of the inspection report

submitted by (testing laboratory):	**QUALITAL, I-Novara**
Date of issue of the approval:	**30.11.2000**
Period of validity of the approval:	**by 31.12.2004**
for the product:	**Serie PUR TRA C.15-VD "Special finishes"**
manufactured by the company:	**VIV-DECORAL S.p.A., I-Cazzano di Tramigna (VR)**
approval number:	**P-0378**

This product may be described and labelled as follows

product tested and approved for the quality mark

and therefore offered to all companies holding the quality label for paint, lacquer and powder coatings on aluminium for architectural applications.

Zurich, 30 November 2003

QUALICOAT

Corrado Baroni
President

Josef Schoppig
General Secretary

APPROVAL

for coating materials

The association for quality control in the paint, lacquer and coating industry, abbreviated to **QUALICOAT**, grants an approval on the basis of the inspection report

submitted by (testing laboratory):	**QUALITAL, I-Novara**
Date of issue of the approval:	**13.09.2001**
Period of validity of the approval:	**by 31.12.2004**
for the product:	**PS-TRA C.15/R-DS , cat. 1 cl. 1**
manufactured by the company:	**Decoral System Srl., I-S. Bonifacio (VR)**
approval number:	**P-0418**

This product may be described and labelled as follows

product tested and approved for the quality mark

and therefore offered to all companies holding the quality label for paint, lacquer and powder coatings on aluminium for architectural applications.

Zurich, 30 November 2003

QUALICOAT

Corrado Baroni
President

Josef Schoppig
General Secretary

APPROVAL

for coating materials

The association for quality control in the paint, lacquer and coating industry, abbreviated to **QUALICOAT**, grants an approval on the basis of the inspection report

submitted by (testing laboratory):	**QUALITAL, I-Novara**
Date of issue of the approval:	**20.05.2003**
Period of validity of the approval:	**by 31.12.2004**
for the product:	**PUR-TRA C.15 DS , cat. 1 cl. 1 "Special Finishes" beige/brown**
manufactured by the company:	**Decoral System Srl., S. Bonifacio (VR)**
approval number:	**P-0506**

This product may be described and labelled as follows

product tested and approved for the quality mark

and therefore offered to all companies holding the quality label for paint, lacquer and powder coatings on aluminium for architectural applications.

Zurich, 30 November 2003

QUALICOAT

Corrado Baroni
President

Josef Schoppig
General Secretary

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

QUALITAL

Certificato n° 03F

Si attesta che

IL PRODOTTO DENOMINATO DECORAL

DELLA DITTA

VIV-DECORAL
Località Costeggiola
37030 CAZZANO DI TRAMIGNA VR

è conforme alle specifiche tecniche QUALITAL procedure P-001 per finiture speciali.

Le decorazioni omologate sono riportate in allegato 1

Il presente certificato è valido
fino al 31.12.2004

Data di prima emissione
24.04.1998

IL PRESIDENTE
Cesare Muccio

Novara 02-01-2004

SINCERT

accreditamento n° 10/B

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

QUALITAL

ALLEGATO 1

(Al certificato n° 03F valido fino al 31.12.2004)

Decorazioni omologate per uso esterno:

DECORAZIONE OMOLOGATA	CARTA	POLVERE	LICENZA QUALICOAT
NOCE	9007/401	PUR-TRA C.20-DS - BASE7	P-0377
NOCE	9007/401	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
NOCE	9007/404	PUR-TRA C.20-DS - BASE7	P-0377
ACACIA A	9017/401	PUR TRA C.20 - DS BASE 7	P-0377
ACACIA	9017/401	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
ACACIA	9017/401	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
NOCE B	9018/401	PUR TRA C.20 - DS BASE 7	P-0377
NOCE	9018/406	PUR-TRA C.20-DS - BASE7	P-0377
ACERO	9023/401	PUR-TRA C.20-DS - BASE8	P-0377
ACERO	9023/401	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
ACERO	9023/401	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
CILEGIO	9026/402	PUR-TRA C.20-DS - BASE8	P-0377

%.

SINCERT

accreditamento n° 10/B

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

QUALITAL

DECORAZIONE OMOLOGATA	CARTA	POLVERE	LICENZA QUALICOAT
CILIEGIO G	9026/402	RPU TRA C.15 - VD BASE 7	P-0378
CILIEGIO G	9026/402	PUR TRA C.20 - DS BASE 7	P-0377
CILIEGIO	9026/402	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
FAGGIO	9043/906	PUR-TRA C.20-DS - BASE8	P-0377
FAGGIO	9043/906	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
FAGGIO	9043/906	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
CASTANO	9044/401	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
CASTANO	9044/403	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
FAGGIO	9050/402	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
ROVERE ASSI 316	9052/405	PUR TRA C.20 - DS BASE 8	P-0377
ROVERE ASSI 316	9052/405	PUR TRA C.15 - VD BASE 8	P-0378
ROVERE ASSI	9052/405	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
ROVERE E	9052/901	PUR TRA C.20 - DS BASE 7	P-0377
ROVERE	9052/901	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
ROVERE	9052/901	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418

%.

SINCERT

accreditamento n° 10/B

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

QUALITAL

DECORAZIONE OMOLOGATA	CARTA	POLVERE	LICENZA QUALICOAT
ROVERE	9052/902	PUR-TRA C.20-DS - BASE7	P-0377
ROVERE	9052/902	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
ROVERE	9052/902	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
DOUGLAS	9053/902	PUR-TRA C.20-DS - BASE8	P-0377
DOUGLAS	9053/902	PUR-TRA C.20-DS - BASE7	P-0377
DOUGLAS	9053/902	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
DOUGLAS	9053/902	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
DOUGLAS	9053/902	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
RUBINO	9059/401	PUR-TRA C.20-DS - BASE7	P-0377
RUBINO	9059/401	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
PINO 304	9060/401	PUR TRA C.15 - VD BASE 8	P-0378
PINO SENZA FIAMMA	9060/401	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
ROVERE	9062/402	PUR-TRA C.20-DS - BASE7	P-0377
ROVERE	9062/402	PUR-TRA C.20-DS - BASE8	P-0377

%

SINCERT

accreditamento n° 10/B

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

QUALITAL

DECORAZIONE OMOLOGATA	CARTA	POLVERE	LICENZA QUALICOAT
ROVERE	9062/402	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
ROVERE	9062/402	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
ROVERE	9062/402	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
ACACIA	9080/401	PUR-TRA C.20-DS - BASE7	P-0377
ACACIA	9080/401	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
RIGATO	9083/401	PUR-TRA C.20-DS - BASE7	P-0377
RIGATO	9083/401	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
ROVERE	9090/401	PUR-TRA C.20-DS - BASE7	P-0377
ROVERE	9090/401	PUR-TRA C.20-DS - BASE8	P-0377
ROVERE	9090/401	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
ROVERE	9090/401	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
ROVERE	9090/408	PUR-TRA C.20-DS - BASE7	P-0377
ROVERE	9090/408	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
PINO CON NODI	9103/401	PUR-TRA C.20-DS - BASE7	P-0377
PINO CON NODI	9103/401	PUR-TRA C.20-DS - BASE8	P-0377

SINCERT

accreditamento n° 10/B

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

QUALITAL

DECORAZIONE OMOLOGATA	CARTA	POLVERE	LICENZA QUALICOAT
PINO CON NODI	9103/401	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
PINO CON NODI	9103/401	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
PINO CON NODI	9103/401	PS-TRA C.15-R DS – BASE 8 – BEIGE	P-0418
PINO CON NODI	9103/401	PS-TRA C.15-R DS - BASE 7-MARRONE	P-0418
ROVERE	9109/402	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
NOCE FIAMMATO	9119/401	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
RADICA	9154/404	PUR-TRA C.15-VD - BASE 7-MARRONE	P-0378
ROVERE	9197/401	PUR-TRA C.20-DS - BASE8	P-0377
ROVERE	9197/401	PUR-TRA C.15-VD - BASE 8 – BEIGE	P-0378
PINO 319	9103/401-201	PUR-TRA C.15-DS - BASE 7	P-0506
PINO SENZA FIAMMA	9060/401-201	PUR-TRA C.15-DS - BASE 7	P-0506
PINO 319	9103/401-201	PUR-TRA C.15-DS - BASE 8	P-0506
PINO SVEDESE	9232/401-201	PUR-TRA C.15-DS - BASE 8	P-0506

- **Carta per sublimazione MIROGLIO**

Il ciclo di verniciatura preliminare è effettuato dalla ditta VERNICIATURA INDUSTRIALE VENETA in possesso del marchio di qualità QUALICOAT n° 704.

Il direttore
Riccardo Boi

19 marzo 2004

SINCERT
ACCREDITAMENTO ORGANISMI CERTIFICAZIONE

accreditamento n° 10/B

Sistema Nazionale per l'Accreditamento di Laboratori

CERTIFICATO DI ACCREDITAMENTO

Numero di Accreditamento

0479

Si certifica che

Il Laboratorio LABORATORIO DECORAL SYSTEM

Viale del Lavoro 5 - 37040 Arcole - VR

è accreditato dal SINAL per l'esecuzione delle prove il cui dettaglio è riportato nelle schede che accompagnano questo certificato e che riportano il numero di accreditamento citato. Le schede possono subire variazioni nel tempo.

L'accreditamento comporta la verifica della competenza tecnica del Laboratorio relativamente alle prove accreditate e del suo Sistema Qualità, in conformità alle prescrizioni della norma UNI CEI EN ISO/IEC 17025.

Il laboratorio accreditato opera anche in conformità alla norma UNI EN ISO 9001/9002:1994 con scopo e campo di applicazione riferiti ai servizi di prova oggetto dell'accreditamento.

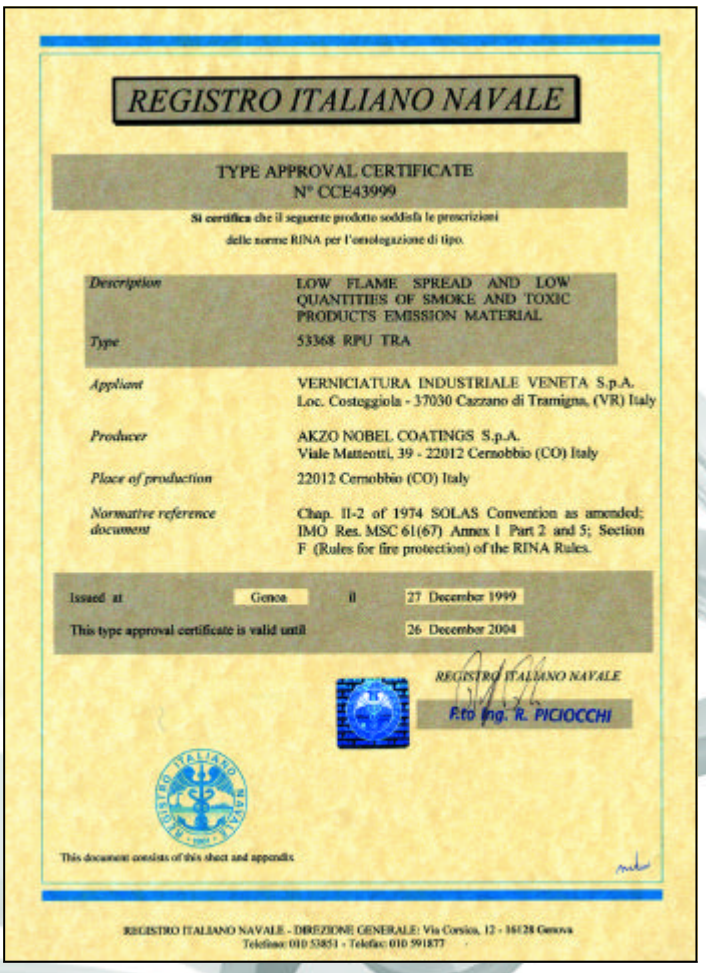
L'accreditamento resta in vigore fino al **maggio 2007** come previsto dalla convenzione stipulata tra il SINAL ed il Laboratorio in oggetto sempre che il Laboratorio conservi la conformità alle prescrizioni del Regolamento Generale e delle regole particolari SINAL applicabili alla fattispecie.

Il Direttore
(Dr. P. Bianco)

Roma, li **16/05/2003**

Revisione 0 del 16/05/2003

Il Presidente
(Dr. S. Allulli)



REGISTRO ITALIANO NAVALE

TYPE APPROVAL CERTIFICATE
N° CCE43999

Si certifica che il seguente prodotto soddisfa le prescrizioni
delle norme RINA per l'omologazione di tipo.

Description	LOW FLAME SPREAD AND LOW QUANTITIES OF SMOKE AND TOXIC PRODUCTS EMISSION MATERIAL
Type	53368 RPU TRA
Applicant	VERNICIATURA INDUSTRIALE VENETA S.p.A. Loc. Costeggiola - 37030 Cazzano di Tramigna, (VR) Italy
Producer	AKZO NOBEL COATINGS S.p.A. Viale Matteotti, 39 - 22012 Cernobbio (CO) Italy
Place of production	22012 Cernobbio (CO) Italy
Normative reference document	Chap. II-2 of 1974 SOLAS Convention as amended; IMO Res. MSC 61(67) Annex 1 Part 2 and 5; Section F (Rules for fire protection) of the RINA Rules.

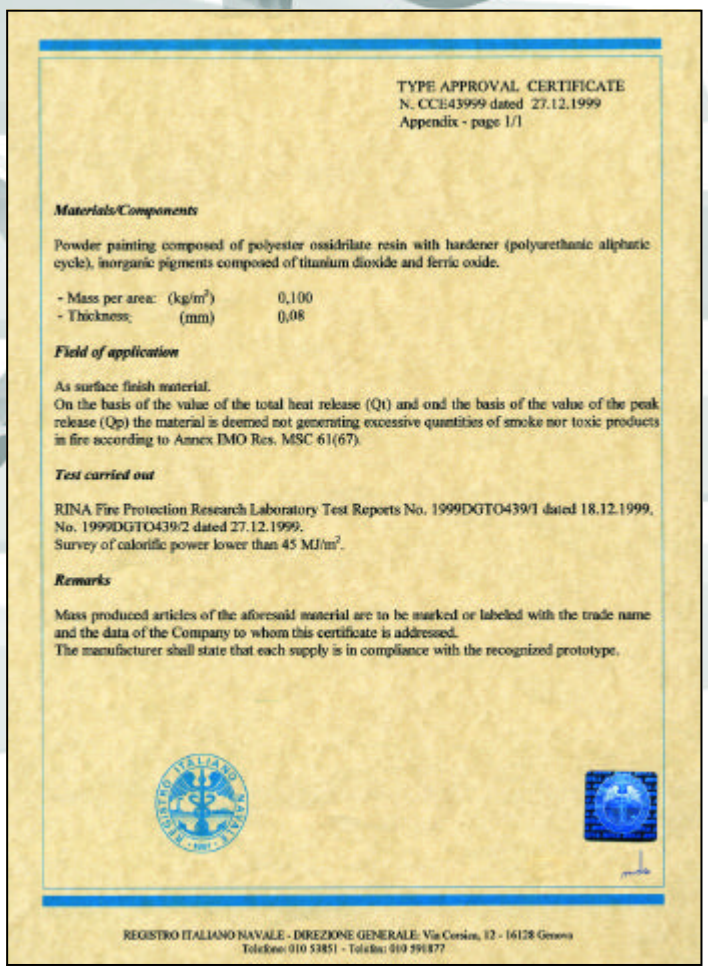
Issued at Genoa il 27 December 1999

This type approval certificate is valid until 26 December 2004

REGISTRO ITALIANO NAVALE
P.to Ing. R. PICIOCCHI

This document consists of this sheet and appendix

REGISTRO ITALIANO NAVALE - DIREZIONE GENERALE: Via Corsica, 12 - 16128 Genova
Telefono: 010 53851 - Telefax: 010 591877



TYPE APPROVAL CERTIFICATE
N. CCE43999 dated 27.12.1999
Appendix - page 1/1

Materials/Components

Powder painting composed of polyester ossidrilate resin with hardener (polyurethanic aliphatic cycle), inorganic pigments composed of titanium dioxide and ferric oxide.

- Mass per area: (kg/m^2) 0,100
- Thickness: (mm) 0,08

Field of application

As surface finish material.
On the basis of the value of the total heat release (Qt) and ond the basis of the value of the peak release (Qp) the material is deemed not generating excessive quantities of smoke nor toxic products in fire according to Annex IMO Res. MSC 61(67).

Test carried out

RINA Fire Protection Research Laboratory Test Reports No. 1999DGTO439/1 dated 18.12.1999, No. 1999DGTO439/2 dated 27.12.1999.
Survey of caloritic power lower than 45 MJ/m^2.

Remarks

Mass produced articles of the aforesaid material are to be marked or labeled with the trade name and the data of the Company to whom this certificate is addressed.
The manufacturer shall state that each supply is in compliance with the recognized prototype.

REGISTRO ITALIANO NAVALE - DIREZIONE GENERALE: Via Corsica, 12 - 16128 Genova
Telefono: 010 53851 - Telefax: 010 591877

REGISTRO ITALIANO NAVALE

CERTIFICATO DI OMOLOGAZIONE DI TIPO
N° CCE43999

Si certifica che il seguente prodotto soddisfa le prescrizioni
delle norme RINA per l'omologazione di tipo.

Descrizione	MATERIALE A LIMITATA ATTITUDINE A PROPAGARE LA FIAMMA ED A BASSA EMISSIONE DI FUMI E DI PRODOTTI TOSSICI
Tipo	53368 RPU TRA
Richiedente	VERNICIATURA INDUSTRIALE VENETA S.p.A. Loc. Costeggiola - 37030 Cazzano di Tramigna, (VR)
Produttore	AKZO NOBEL COATINGS S.p.A. Viale Matteotti, 39 22012 - Cernobbio COMO
Luogo di produzione	22012 - Cernobbio COMO
Norme di riferimento	Cap. II-2 della Convenzione SOLAS 1974 come emendata; in conformità alla IMO Res. MSC 61(67) Annesso 1 Parte 2 e 5; Sezione F (Regolamenti per la protezione contro gli incendi) dei Regolamenti del RINA

Rilasciato a Genova il 27 Dicembre 1999

Il presente certificato è valido fino a 26 Dicembre 2004

REGISTRO ITALIANO NAVALE
F.to Ing. R. PICIOCCHI

Il documento è composto da questa pagina e dall'appendice.

REGISTRO ITALIANO NAVALE - DIREZIONE GENERALE: Via Corsica, 12 - 16128 Genova
Telefono: 010 53851 - Telefax: 010 591877

TYPE APPROVAL CERTIFICATE
N. CCE43999 dated 27.12.1999
Appendix - page 1/1

Materials/Components

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The manufacturer shall state that each supply is in compliance with the recognized prototype.

REGISTRO ITALIANO NAVALE - DIREZIONE GENERALE: Via Corsica, 12 - 16128 Genova
Telefono: 010 53851 - Telefax: 010 591877

QUALITAL®
ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO
Sede Legale: Via Dei Missaglia 97 20142 Milano tel. 02/89303679
Direzione e Segreteria: Via Pacinotti 1F 28100 Novara tel 0321/691523 fax 0321/692601
Laboratorio di Prova: Via Pacinotti 1F 28100 Novara tel 0321/691523 fax 0321/692601
mail: qualital@tin.it

Circular Letter no° 6/2002

To all our Job Coaters and Powder coating manufactures associates

Novara, Italy : 22-07-2002.

Re.: Special finishing with QUALITAL label.

We wish to inform all our associates about the latest developments, as follow :

1. QUALICOAT, based on the tests and researches carried out by QUALITAL on the "Special Finishing Field", decided that the all the Certifications issued by QUALITAL, so far, are automatically recognized by QUALICOAT.
Thus, the finishing homologated by QUALITAL do not need any further approvals by QUALICOAT.

2. QUALICOAT, in order to avoid any misunderstandings between Coated and Decorated products, decided to mark the decoration (decoration and applicator/decorator) with a logo, which is different from the one used by the Coater. Such logo will be defined by the European commission, during the next meeting.

3. The QUALICOAT group has modified several QUALITAL technical procedures, which are under final approval.

4. The QUALITAL laboratory is the only and centralized one, recognized by QUALICOAT to perform all the homologation tests on the decoration finishing.

Each QUALITAL special finishing licensee will receive a letter, in which will be highlighted all the finishing, approved by QUALICOAT, while the European certification will be issued on those finishing, soon.

We remain at full disposal, for any further information is needed.

Yours sincerely,

The director
R. Boi

QUALITAL®
ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO
Sede Legale: Via Dei Missaglia 97 20142 Milano tel. 02/89303679
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Laboratorio di Prova: Via Pacinotti 1F 28100 Novara tel 0321/691523 fax 0321/692601
mail: qualital@tin.it

TESTING REPORT

TEST FOR THE QUALICOAT HOMOLOGATION OF THE PRODUCT SERIAL NO. PUR TRA C.20-DS FOR SPECIAL FINISHING CATEGORY 1 BY DECORAL SYSTEM SRL. NEW LICENCE

DECLARATION
The following relation concerns exclusively the tested material.
The relation can not be partially reduced, prior QUALITAL approval.

REPORT NO. 1859

Novara, Italy 23th November 2000

THE ORIGINAL REPORT HAS BEEN DRAWN UP IN ITALIAN LANGUAGE.
THE TRANSLATION INTO ENGLISH HAS BEEN CARRIED OUT UNDER DECORAL SYSTEM'S RESPONSABILITY, WHERE IN ITS LABORATORY IT IS KEPT THE ORIGINAL REPORT, WHICH IS THE ONLY REFERENCE IN CASE OF DOUBT.

TESTING REPORT

Purpose : New homologation 2000

Applicant : DECORAL SYSTEM SRL, Via Camporosolo, 200 - 37047 S. BONIFACIO VR

In charge of : Sig. Fenzi

COATING PRODUCTS CODES	APPLIED AT	N DATE
PUR-TRA C.20-DS	Applicator	5/09/2000.
PUR-TRA C.20-DS	Applicator	5/09/2000

TYPE OF PRODUCT		LABEL	GLOSS CATEGORY
Powder	X	PUR TRA C.20/DS	1
Liquid coat			
a) PVDF			
b) PVDF Metalized 3 layers			
c) Polyester without primer			
d) Other paint thermosetting			
e) Paint at 2 components			

Laboratory in charge to make the tests : QUALITAL

Laboratory where the samples were made : INSPECTED

Curing temperature : 200 ° C.

Curing time : 20'

Laboratory controller : Dr.ssa Barbato

Laboratori address : Via Pacinotti, 1F, NOVARA (Italy)

TESTS PERFORMED	COLOURS APPROVED			
	BEIGE	MARRONE	RAL 0	RAL
1. GLOSS (ISO 2813) v.s. GLOSS CATEGORY 1	v.m.% 17	v.m.% 19	v.m.% 0	v.m.%
2. THICNESS (ISO 2370) e.s. > 60 um	v.m. 73µm	v.m. 83µm	v.m. 0µm	v.m. 0µm
3. ADHESION (ISO 2409) e.s. > 60 um blade distance : 1 mm up to 60 um; 2 mm above.	v.m. 69µm S 0	v.m. 83µm S 0	v.m. 0µm S 0	v.m. 0µm S 0
4. BUCHOLZ (ISO 2815) e.s. > 60 um Minimum value 80	v.m. 69µm 108	v.m. 75µm 97	v.m. 0µm 0	v.m. 0µm 0
5. CUPPING (ISO 1520) e.s. > 60 um No cracking or detachment with a 5 mm depth.	v.m. 69µm S	v.m. 75µm S	v.m. 0µm S	v.m. 0µm S
6. BENDING (ISO 1519) e.s. > 60 um No cracking or detachment with a 5 mm diameter.	v.m. 69µm S	v.m. 75µm S	v.m. 0µm S	v.m. 0µm S
7. IMPACT (ECCA T5) e.s. > 60 um (only for powder) No cracking or detachment with energy of 2.5 Nm.	v.m. 69µm S	v.m. 75µm S	v.m. 0µm S	v.m. 0µm S
8. KESTERNICH (ISO 3231) e.s. > 60 um No penetration over 1 mm	v.m. 77µm S	v.m. 84µm S	v.m. 0µm S	v.m. 0µm S
9. ACETIC SALT SPRAY (ISO 9227) e.s. > 60 um According to QUALICOAT specifications.	v.m. 83µm S	v.m. 105µm S	v.m. 0µm S	v.m. 0µm S

TESTS PERFORMED	COLOURS APPROVED							
	BEIGE		**MARRONE**		**RAL 0**		**RAL**	
10. Accelerated Weather SUN TEST Loss of gloss not more than 50% of the initial value. 1.INITIAL GLOSS 2.FINAL GLOSS	v.m. 81 µm		v.m. 86 µm		v.m. 0 µm		v.m. 0 µm	
	1	2	1	2	1	2	1	2
	18	13	19	13	0	0	0	0
ΔE = E variation (Maximum value permitted) [(0) to be fixed]	ΔE 0,85 (2)		ΔE 0,8 (4)		ΔE 0 (0)		ΔE 0	
11.Water Resistance Boiling / Pressure cooker No defects nor detachment.	v.m. 71 µm S S		v.m. 80 µm S S		v.m. 0 µm S		v.m. 0 µm S	
12.Constant Climate condensation water test DIN 50017 No defects nor detachment.	v.m. 73 µm S		v.m. 100 µm S		v.m. 0 µm S		v.m. 0 µm S	
13.POLIMERIZATION Loss of more than 5 units	v.m. µm S		v.m. µm S		v.m. µm S		v.m. µm S	
14.MORTAR No defects nor cracking	v.m. 78 µm S S		v.m. 83 µm S S		v.m. 0 µm S		v.m. 0µm S	
15.NATURAL EXPOSURE (ISO 2810)								

Laboratory responsible signature

General Licencee Recomandation
FAVORABLE

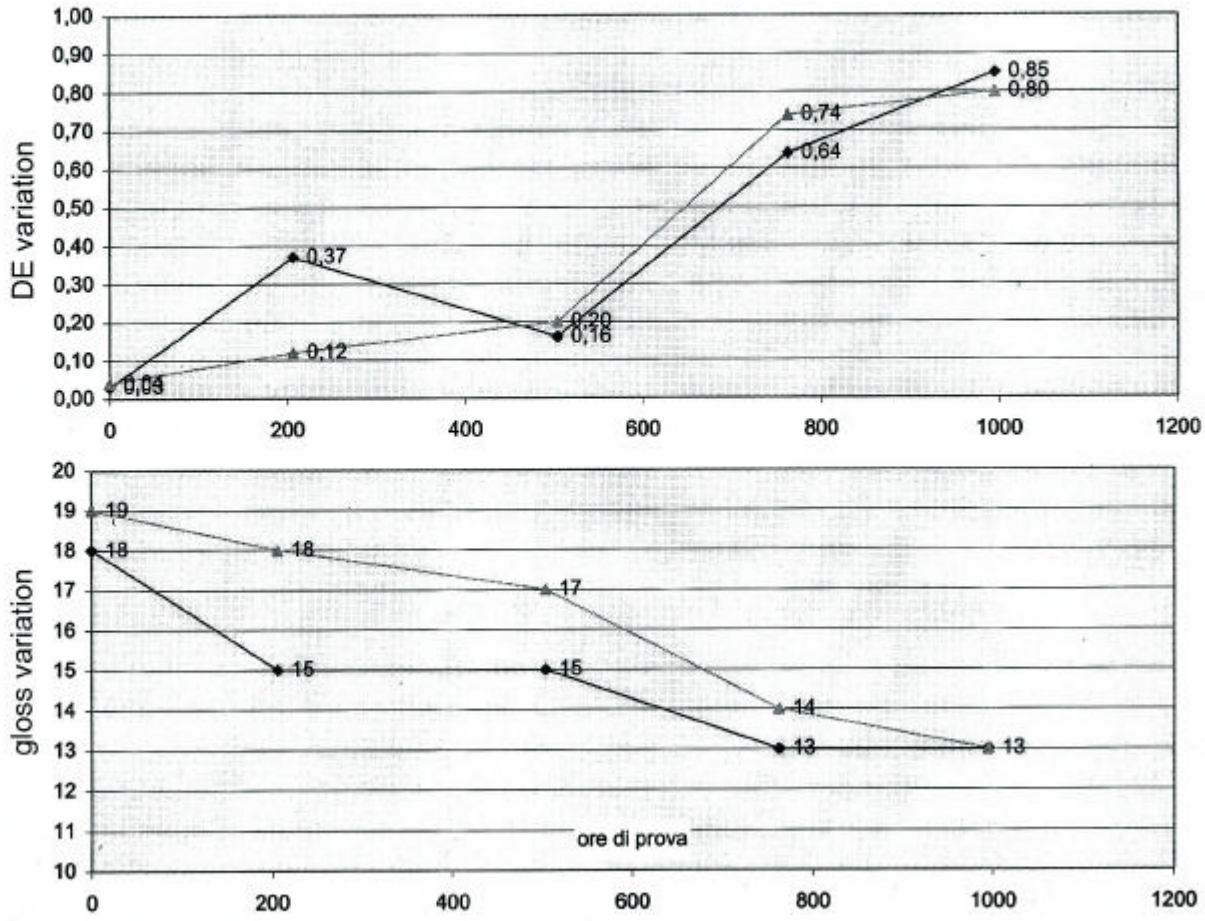
Signature
The director

QUALITAL ®

ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO

Sede legale: Via Dei Missaglia 97 20142 Milano tel. 02/89303679
Direzione e segreteria: Via Pacinotti 1F 28100 Novara tel 0321/691523 fax 0321/692601
Laboratorio di prova : Via Pacinotti 1F 28100 Novara Tel. 0321/691523 fax 0321/692601
E-mail : qualital@tin.it

VIV DECORAL (c. 125)
PUR-TRA C.20-DS
Solarbox 3000



QUALITAL®
ASSOCIAZIONE DI CERTIFICAZIONE INDUSTRIALE DELL'ALLUMINIO
Sede Legale: Via Dei Missaglia 97 20142 Milano tel. 02/89303679
Direzione e Segreteria: Via Pacinotti 1F 28100 Novara tel 0321/691523 fax 0321/692601
Laboratorio di Prova: Via Pacinotti 1F 28100 Novara tel 0321/691523 fax 0321/692601
mail: qualital@tin.it

TESTING REPORT

Subject : Test for the homologation of 6 special finishing under QUALITAL label.

APPLICANT : VIV DECORAL - Localita' Costeggiola 37030 CAZZANO DI TRAMIGNA - VR.

RELATION N°. 1910

Declaration :
· The following relation concerns exclusively the tested material.
· The relation can not be partially reduced, prior QUALITAL approval.

THE ORIGINAL REPORT HAS BEEN DRAWN UP IN ITALIAN LANGUAGE.
THE TRANSLATION INTO ENGLISH HAS BEEN CARRIED OUT UNDER DECORAL SYSTEM'S RESPONSABILITY, WHERE IN ITS LABORATORY IT IS KEPT THE ORIGINAL REPORT, WHICH IS THE ONLY REFERENCE IN CASE OF DOUBT.

The director
Boi Riccardo

Novara, Italy 19th January 2001

Subject : Test for the homologation of
6 special finishing under QUALITAL label.

1.PURPOSE

VIV-DECORAL di Cazzano di Tramigna - VR requested on date 02/10/00, to test 6 (six) patterns on wood effect with the QUALITAL homologation procedures P-001, carried out by QUALITAL.
The following relation is referring to the test executed and the results obtained.

2.SAMPLES DESCRIPTION

The samples are made of Aluminium profile and sheets decorated on wood effect as follow:

ns. Rif.	Rif. Cliente		
M	PUR TRA C.20 - DS BASE 7	9026/402	CILIEGIO G
N	PUR TRA C.20 - DS BASE 7	9018/401	NOCE B
O	PUR TRA C.20 - DS BASE 7	9017/401	ACACIA A
P	PUR TRA C.20 - DS BASE 7	9052/901	ROVERE E
Q	PUR TRA C.20 - DS BASE 8	9060/401	PINO 304
R	PUR TRA C.20 - DS BASE 8	9052/405	ROVERE ASSI 316

The finishing is made in two steps. The first one consists on applying powder based on the aluminium surface. The second one consists on decorating the powder coated surface.
The second step happened by transferring the special inks pattern printed on the film into the powder coating layer, using a heat transfer process.
The powder base, series PUR TRA C.20, is homologated QUALICOAT with licence no. P-0377. The whole powder coating cycle, except the heat transferring process, is executed by VERNICIATURA INDUSTRIALE VENETA SPA, which owns a QUALICOAT certification no. 704.

3.TESTED MADE AND RESULTS OBTAINED.

As follow, we showed the test's results.
We specify that the test B thickness average value has been carried out on the samples, where the mechanical tests have been performed.
The other tests showed the average value, measured on the same sample.
S means TEST PASSED, while N means TEST NOT PASSED.

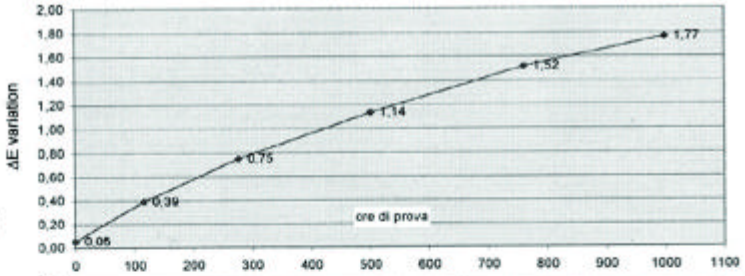
TESTS PERFORMED	BASE 7			
	M	N	O	P
	9026/402 CILIEGIO G	9018/401 NOCE B	9017/401 ACACIA A	9052/901 ROVERE E
a.GLOSS (ISO 2813:1978) Gloss	16	16	12	16
b.THICKNESS (UNI EN ISO 2360:1987) e.s. > 60 µm v.m. (µm)	76	71	62	74
c.ADHESION (UNI EN ISO 2409:1996)	0	0	0	0
d.BUCHHOLZ (UNI EN ISO 2815) Minimum value 80	not detectable	not detectable	not detectable	not detectable
e.CUPPING (UNI EN ISO 1520) No cracking or detachment with a 5 mm depth.	S	S	S	S
f.BENDING (UNI EN ISO 1519) No cracking or detachment with a 5 mm diameter.	S	S	S	S
g.IMPACT (ECCA T5) No cracking or detachment with energy of 2.5 Nm.	S	S	S	S
h.ACETIC SALT SPRAY (UNI ISO 9227) According to QUALICOAT specifications. e.s. > 60 µm	61	72	78	70
Corrosion lenght max 4mm	1	2	2	1
Corroded area max 16mm²/10cm	11	7	5	15
i.FILIFORM CORROSION as per QUALICOAT spec.				
Maximum width corrosion 4 mm	2	2	2	3
Maximum surface corroded 16 mm2 / 10 cm.	48	48	47	63
l.ACCELERATED WEATHERING TEST (UNI EN ISO 11341 : 2000) e.s. > 60 µm	85	95	70	82
Initial gloss	26	18	12	19
Final gloss	20	12	8.8	15

TESTS PERFORMED	BASE 7			
	M	N	O	P
	9026/402 CILIEGIO G	9018/401 NOCE B	9017/401 ACACIA A	9052/901 ROVERE E
Residual value (not less than 50%)	77%	67%	73%	79%
Colour variation : ΔE	1.77	1.32	1.31	1.92
Final evaluation	ACCETTABILE	ACCETTABILE	ACCETTABILE	ACCETTABILE
m-UV Resistance (ISO 2135:1984)**	85	95	70	82
Colour variation : ΔE	1.40	1.46	2.06	1.39
Blue scale evaluation	7+	7/8	7	7
n. Pressare cocker (QUALICOAT spec.) e.s. > 60 µm	81	80	59	58
No defects nor detachments.	S	S	S	S
o. Constant Climate condensation water test (QUALICOAT spec. Ed.9) e.s. > 60 um	61	68	72	58
No defects nor detachments.	S	S	S	S
p. Mortar Resistance (QUALICOAT spec. Ed.9) e.s. > 60 um	83	81	67	78
No defects nor detachments.	S	S	S	S
q. Machu test (QUALICOAT spec. Ed.9)	S	S	S	S
r. Humid atmosphere, with SO2 Resistance (UNI EN ISO 1999)	84	86	71	79
e.s. > 60 um	S	S	S	S

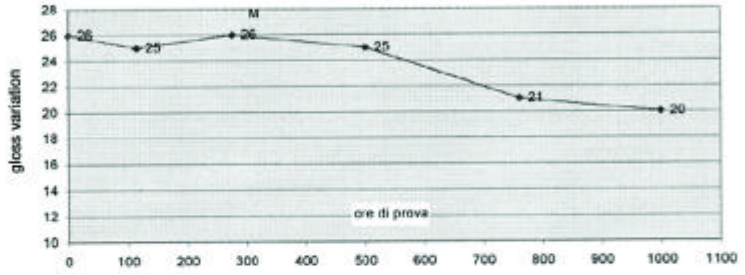
Accelerated weathering test.

As follow, we report the colour and gloss variation, related to the during time of the test for the 4 finishing BASE 7:

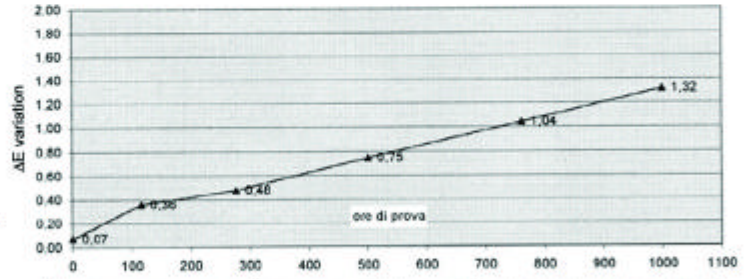
VIV DECORAL (C. 130)
PUR TRA C.20-DS base 7
Accelerated Weathering test



M



VIV DECORAL (C. 130)
PUR TRA C.20-DS base 7
Accelerated Weathering test



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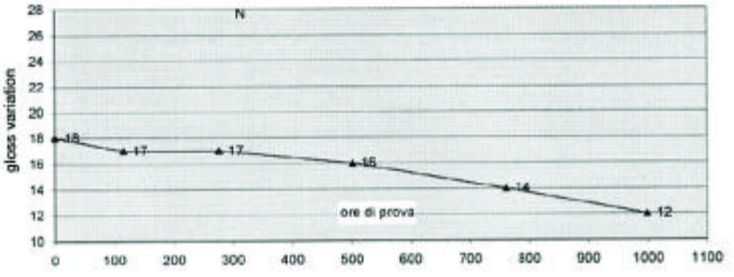
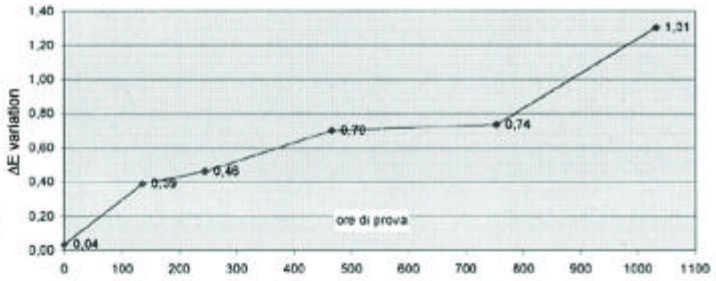


VIV DECORAL (C. 130)
PUR TRA C.20-DS base 7
Accelerated Weathering test.



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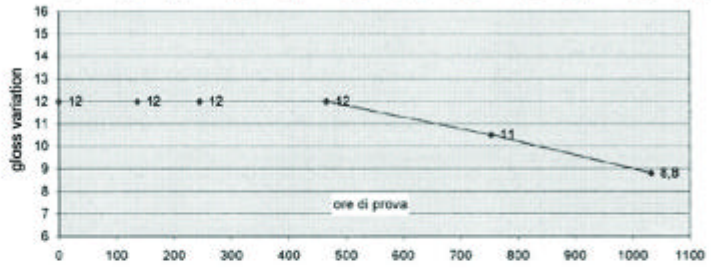
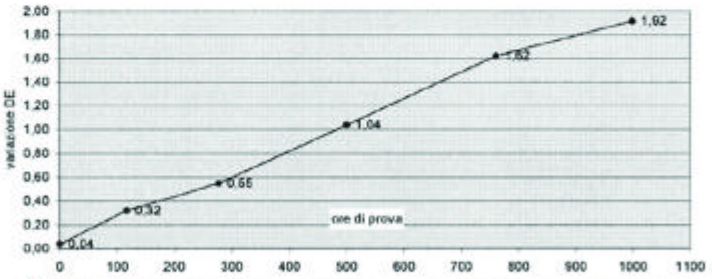


VIV DECORAL (C. 130)
PUR TRA C.20-DS base 7
Accelerated Weathering test.



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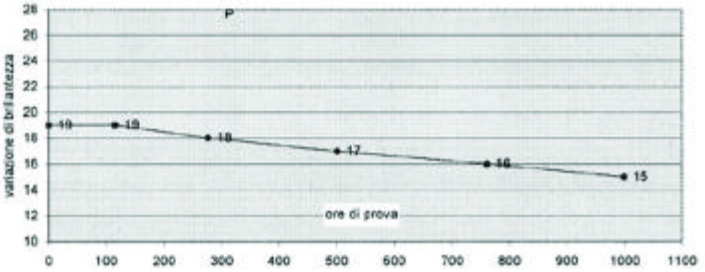


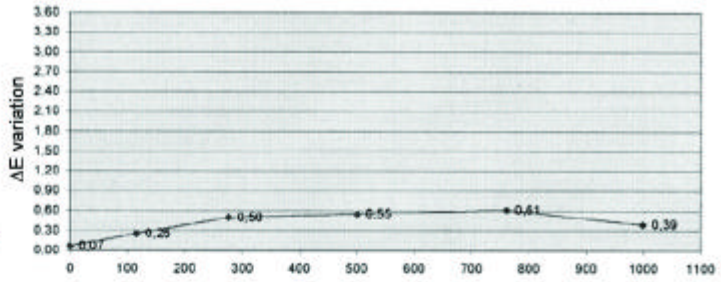
TESTS PERFORMED	BASE 8	
	Q	R
	9060/401 PINO 304	9052/405 ROVERE ASSI 316
a.Gloss (ISO 2813:1978)		
Gloss	18	22
b.THICKNESS (UNI EN ISO 2360:1987)		
e.s. > 60 µm v.m. (µm)	77	80
c.ADHESION (UNI EN ISO 2409:1996)	0	0
d.BUCHHOLZ (UNI EN ISO 2815:2000)		
Minimum value 80	100	not detectable
e.CUPPING (UNI EN ISO 1520:1998)		
No cracking or detachment with a 5 mm depth.	S	S
f.BENDING (UNI EN ISO 1519:1998)		
No cracking or detachment with a 5 mm diameter	S	S
g.IMPACT (UNI EN ISO 6272:1996)		
No cracking nor detachment with energy of 2.5 Nm.	S	S
h.ACETIC SALT SPRAY (UNI ISO 9227:1993)		
e.s. > 60 um	77	76
According to QUALICOAT specifications.	1	2
Corroded area max 16mm²/10cm	5.5	2
i.FILIFORM CORROSION as per QUALICOAT spec.		
corrosion lenght	3	2
corroded area	38	39
l.ACCELERATED WEATHERING TEST (UNI EN ISO 11341 : 2000)		
e.s. > 60 µm	86	86
Initial gloss	18	16
Final gloss	14	13
Not less then 50% of gloss remaining	78%	81%
ΔE variation	0.39	1.20
final evaluation	ACCEPTABLE	ACCEPTABLE
m.UV RESISTANCE	86	86
ΔE variation	0.72	1.07

TESTS PERFORMED	BASE 8	
	Q	R
	9060/401 PINO 304	9052/405 ROVERE ASSI 316
blue scale evaluation	7	7
n. Pressure cooker (QUALICOAT spec.Ed.9) e.s. > 60 µm	83	87
No defects nor detachments.	S	S
o. Constant Climate condensation water test (QUALICOAT spec. Ed.9) e.s. > 60 µm	68	68
No defects nor detachments.	S	S
p. Mortar Resistance (QUALICOAT spec. Ed.9)	85	88
No defects nor detachments.	S	S
q. Machu test (QUALICOAT spec. Ed.9)	S	S
r. Humid atmosphere, with SO2 Resistance (UNI EN ISO 1999) e.s. > 60 µm	85	90
	S	S

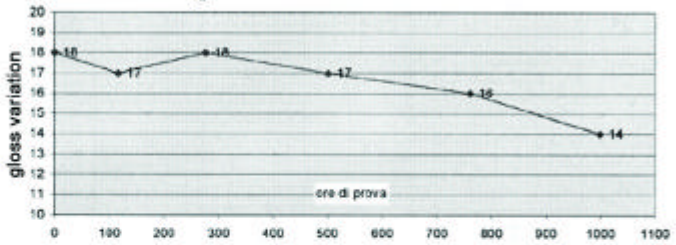
Accelerated weathering test.

As follow, we report the colour and gloss variation, related to the during time of the test for the 2 finishing BASE 8:

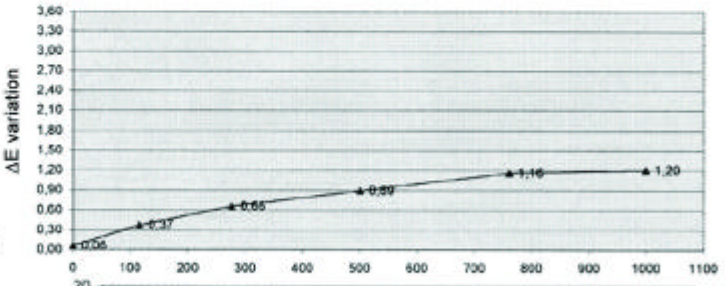
VIV DECORAL (C. 130)
PUR TRA C.20-DS base 8
Accelerated Weathering test



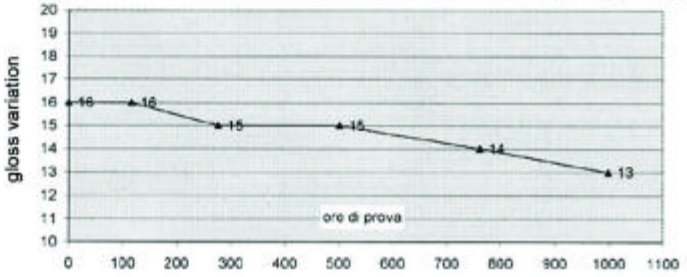
Q



VIV DECORAL (C. 130)
PUR TRA C.20-DS base 8
Accelerated Weathering test



R



4.CONCLUSIONS

In behalf of VIV-DECORAL, the homologation tests have been carried out according to QUALITAL, on 6 special finishing.
The evaluation is based on P-001 procedure, developed by QUALITAL as follow:

	FINISHING	RESULT
M	CILIEGIO G	POSITIVE
N	NOCE B	POSITIVE
O	ACACIA A	POSITIVE
P	ROVERE E	POSITIVE
Q	PINO 304	POSITIVE
R	ROVERE ASSI 316	POSITIVE

ORDER BY:

CUSTOMER	VIV DECORAL	
REFERRING	ENVELOP DATED 02/10/2000.	
SAMPLES RECEIVED DATE	03/10/2000	
FROM (LAB/CUST.)	CUSTOMER	
NO. OF ORDER	130	
ORDER OPENING DATE	04/10/2000	
TYPE OF TESTS	a. GLOSS b. THICKNESS c. Adhesion d. Buchholz e. Cupping f. Bending g. Impact h. Salt Spray	i. Filiform corrosion l. Accelerated Weathering test m UV Resistance n. Machu test
EQUIPMENTS	a. GLOSS METER ERICHSEN b. THICKNESS METER FISHER c. Cutter monoblade d. Buchholz Erichsen e. Manual Cupping Braive Inst. f. Cylinder mandrill 5 mm g. Equipment with Erichsen hummer.	h. Chamber Aster i. Chamber HERAEUS l. Solarbox 3000 m. Solarbox 100 n. Mixer VELP
PROCEDURES	a. MP-1 b. MP-2 c. MP-3 d. MP-4 e. MP-5 f. MP-7	g. MP-6 h. MP-8 l. MP-9 q. MP-13
TESTS STARTING DATE	10/10/2000	
END OF WORK	10/12/2000	

Report:

n° report	report date	type of test

Responsable
Rossella Barbaro

ACT LABORATORIES, INC.

273 Industrial Dr. • P.O. Box 735 • Hillsdale, MI 49242-0735 • (517) 439-1485 • Fax (517) 439-1652

LABORATORY TEST REPORT **ACT PROJECT AIN 79060**

Program:	ASTM Performance Test
Submitted By:	Salazer Erika, Verniciatura Industriale Veneta
Material:	Decoral SRL Panels

Evaluation #1:	Specular 60 Degree Gloss
Test Method:	ASTM D 523-94
Instrument:	Hunterlab Glossmeter Model D48-7 (ACT #20)
Number of Readings:	Three per Sample, Average Recorded
Number of Tests:	One test per Sample as Received

Specular 60 Degree Gloss Test Data:

ID	Color	Specular Gloss 60°
A-7-A	Acacia	24.6
B-7-A	Noce	25.3
C-7-A	Radica	26.2
D-7-A	Radica	25.9
E-7-A	Rovere	22.9
F-7-A	Rovere	26.1
G-7-A	Ciliego	27.5

Prepared by:

JOS
03/24/98 JS-12 pp. 51-52

Approved by:

Tracy K. Boore (FOR)
Frank W. Lutze
Director of Laboratory Services

Date Material Was Received 01/20/98, Date Test Was Completed 03/23/98.

ACT LABORATORIES, INC.

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LABORATORY TEST REPORT **ACT PROJECT AIN 79060**

Program:	ASTM Performance Test
Submitted By:	Salazer Erika, Verniciatura Industriale Veneta
Material:	Decoral SRL Panels
Evaluation #2:	Film Thickness by Microscopical Examination of Cross Section
Test Method:	ASTM D1400-94
Instrument:	Fischerscope MULTI 650 C (ACT #14)
Number of Readings:	Three per Panel; Average Recorded
Total Film:	All Coatings are Included (Including Non-Ferrous Metallic Coatings where Applicable).
mil:	0.001 Inch

Film Thickness Test Data:

ID	Color	Total Film
A-7-A	Acacia	3.4 mils
B-7-A	Noce	3.5
C-7-A	Radica	2.5
D-7-A	Radica	3.7
E-7-A	Rovere	1.9
F-7-A	Rovere	2.7
G-7-A	Ciliego	3.1

Evaluation #3: Crosshatch Adhesion Test

Test Method: ASTM D 3359-95a Method B - Crosshatch Adhesion

Number of Tests: One crosshatch test per panel

Scribing Tool: Gardco Model P-A-T, 2.0 mm blade spacing

Tape: Permacel Brand 99 (ACT #286)

Adhesion Rating Scale:

5B - The edges of the cuts are completely smooth; none of the squares of the lattice is detached.

4B - Small flakes of the coating are detached at intersections; less than 5 % of the area is affected.

3B - Small flakes of the coating are detached along edges and at intersections of cuts. The area affected is 5 to 15 % of the lattice.

2B - The coating has flaked along the edges and on parts of the squares. The affected area is 15 to 35 % of the lattice.

1B - The coating has flaked along the edges of cuts in large ribbons and whole squares have detached. The area affected is 35 to 65 % of the lattice.

0B - Flaking and detachment worse than Grade 1.

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LABORATORY TEST REPORT **ACT PROJECT AIN 79060**

Program: ASTM Performance Test
Submitted By: Salazer Erika, Verniciatura Industriale Veneta
Material: Decoral SRL Panels

Crosshatch Adhesion Test Data:

ID	Color	Adhesion Rating
A-7-A	Acacia	5B
B-7-A	Noce	5B
C-7-A	Radica	5B
D-7-A	Radica	5B
E-7-A	Rovere	5B
F-7-A	Rovere	5B
G-7-A	Ciliego	5B

Evaluation #4: Condensing Humidity
Test Methods: ASTM D 2247-94
ASTM D 3359-95a Method B
ASTM D 714-94 Blister Ratings
Tape: Permacel Brand 99 (ACT #286)
Exposure: 1000 Hours
Humidity Chamber: Singleton Model 22 (ACT #192)
Singleton Model 24 (ACT #575)

Evaluations: Visual Examination for Blistering
Final Crosshatch Adhesion Test per Evaluation #3

Blister Size Scale: 10 No Blistering
8 Blisters Easily Seen by Unaided Eye
6,4,2 See Photographic Standards in ASTM D 714
Blister Frequency: N=None, F=Few, M=Medium, MD=Medium Dense, D=Dense
Blister Pattern: Uniform, Streaks, Clusters, Patches, Edges, etc.

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LABORATORY TEST REPORT

Program: ASTM Performance Test
Submitted By: Salazer Erika, Verniciatura Industriale Veneta
Material: Decoral SRL Panels

Condensing Humidity Test Data

ID	Color	Blister Rating Size	Blister Rating Frequency	Blister Rating Description	Final Adhesion Rating
A-7-A	Acacia	10	None	None	5B
B-7-A	Noce	10	None	None	5B
C-7-A	Radica	10	None	None	5B
D-7-A	Radica	10	None	None	5B
E-7-A	Rovere	10	None	None	5B
F-7-A	Rovere	10	None	None	5B
G-7-A	Ciliego	10	None	None	5B

Evaluation #5: Copper Acetic Acid-Salt Spray Test
Test Methods: ASTM B 368-90 Cabinet Conditions
ASTM D 610-95 Corrosion Ratings
ASTM D 1654-92 Procedure A - Method 2, Scraping

Exposure: 1000 Hours
Exposure Chamber: Singleton Model 22 (ACT #17)
Scribing Tool: Straight-shank tungsten carbide tip, lathe cutting tool (Style E)
Scraping Tool: A rigid spatula with no sharp edges or sharp corners
Examinations: Visual Examination for Corrosion
Creepback Evaluation

Corrosion Rating Scale:
10 - No Corrosion, less than 0.01% of surface rusted
9 - Minute rusting, less than 0.03% of surface rusted
8 - Few isolated rust spots, less than 0.1% of surface rusted
7 - Less than 0.3% of surface rusted
6 - Extensive rust spots but less than 1% of surface rusted
5 - Rusting to the extent of 3% of surface rusted
4 - Rusting to the extent of 10% of surface rusted
3 - Approximately one sixth of the surface rusted
2 - Approximately one third of the surface rusted
1 - Approximately one half of the surface rusted
0 - Approximately 100% of the surface rusted

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LABORATORY TEST REPORT **ACT PROJECT AIN 79060**

Program: ASTM Performance Test
Submitted By: Salazer Erika, Verniciatura Industriale Veneta
Material: Decoral SRL Panels

Creepback from Scribe: A measurement of the loss of adhesion between the paint film and metal surface. The distance between the scribed line and the unaffected paint film.

Average: The mean of 5 measurements of creepback from the scribe, at points 10 mm apart centered on the scribed line. Each measurement is an average of the creepback on two sides of the scribed line.

Maximum: A measurement of the creepback from the scribe, at the point with the most extensive adhesion loss, discounting the areas less than two centimeters from the ends of the scribed line.

Minimum: A measurement of the creepback from the scribe, at the point with the least extensive adhesion loss, discounting the areas less than two centimeters from the ends of the scribed line.

mm: Millimeter

Degree of Change:

None: No change
Trace: Observable only by very careful examination
Slight: Barely observable with normal examination
Moderate: Modest change, Readily noticeable
Pronounced: Distinct change, Easily observed with casual examination
Severe: Very obvious change

Copper Acetic Acid-Salt Spray Test Data:

		Creepback from Scribe			Corrosion Rating		Visual
ID	Color	Average	Maximum	Minimum	Edges Included	Edges Disregarded	Appearance
A-7-B	Acacia	0.3 mm	0.6 mm	0.2 mm	7	10	*
B-7-B	Noce	0.3	0.6	0.2	7	10	**
C-7-B	Radica	0.4	0.6	0.2	7	10	None
D-7-B	Radica	0.5	1.5	0.2	8	10	None
E-7-B	Rovere	0.4	0.8	0.2	7	10	None
F-7-B	Rovere	0.3	0.8	0.2	7	10	None
G-7-B	Ciliego	0.3	0.7	0.2	7	10	None

* One blister approximately 0.5 mm in size.
** Five blisters approximately 0.5 to 1.0 mm in size.

Europäisches Patentamt | European Patent Office | Office européen des brevets

Urkunde Certificate Certificat

Es wird hiermit bescheinigt, daß für die in der beigefügten Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.

It is hereby certified that a European patent has been granted in respect of the invention described in the annexed patent specification for the Contracting States designated in the specification.

Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet ci-joint, pour les Etats contractants désignés dans le fascicule de brevet.

Europäisches Patent Nr. **European Patent No.** **Brevet européen n°**

0857581

Patentinhaber **Proprietor of the Patent** **Titulaire du brevet**

V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR/IT

München, den 18.10.00
Munich,
Fait à Munich, le

Ingo Kober

Präsident des Europäischen Patentamts
President of the European Patent Office
Président de l'Office européen des brevets

EPA/EPO/OEB Form 2031 01.96

Europäisches Patentamt | European Patent Office | Office européen des brevets

Urkunde Certificate Certificat

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Europäisches Patent Nr. **European Patent No.** **Brevet européen n°**

0817728

Patentinhaber **Proprietor of the Patent** **Titulaire du brevet**

V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR/IT

München, den
Munich,
Fait à Munich, le 21.04.99

Ingo Kober

Präsident des Europäischen Patentamts
President of the European Patent Office
Président de l'Office européen des brevets

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Urkunde Certificate Certificat

Es wird hiermit bescheinigt, daß für die in der beigefügten Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.

It is hereby certified that a European patent has been granted in respect of the invention described in the annexed patent specification for the Contracting States designated in the specification.

Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet ci-joint, pour les Etats contractants désignés dans le fascicule de brevet.

Europäisches Patent Nr. **European Patent No.** **Brevet européen n°**

0950540

Patentinhaber **Proprietor of the Patent** **Titulaire du brevet**

V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR/IT

München, den
Munich,
Fait à Munich, le 27.03.02

Ingo Kober

Präsident des Europäischen Patentamts
President of the European Patent Office
Président de l'Office européen des brevets

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MINISTERO DELL'INDUSTRIA DEL COMMERCIO E DELL'ARTIGIANATO
DIREZIONE GENERALE PER LO SVILUPPO PRODUTTIVO E LA COMPETITIVITA'
UFFICIO ITALIANO BREVETTI E MARCHI

BREVETTO PER INVENZIONE INDUSTRIALE

N 01290267

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata:

num. domanda	anno	U.P.I.C.A.	data pres. domanda	classifica
000231	97	MILANO	06 02 1997	B44C

TITOLARE VERNICIATURA INDUSTRIALE VENETA S.P .A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA SRL
P.ZA BERNINI 6
20100 MILANO

TITOLO PROCEDIMENTO PER LA PRODUZIONE DI UN SUPPORTO DI TRASFERIMENTO A COLORI SUBLIMABILI PER DECORARE OGGETTI O MANUFATTI METALLICI, IN MATERIALE PLASTICO E SIMILI, SUPPORTO DI TRASFERIMENTO COSI' OTTENUTO ED APPARECCHIATURA PER LA SUA REALIZZAZIONE

INVENTORE FENZI GIANCARLO

Roma, 22 OTTOBRE 1998

IL DIRETTORE DELLA DIV. XVIII
F.to ATTILIO RONCACCI

'20 GEN. 1999

PER COPIA CONFORME DELL'ORIGINALE

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MINISTERO DELL'INDUTRIA DEL COMMERCIO E DELL'ARTIGIANATO
DIREZIONE GENERALE PER LO SVILUPPO PRODUTTIVO E LA COMPETITIVITA'
UFFICIO ITALIANO BREVETTI E MARCHI

BREVETTO PER INVENZIONE INDUSTRIALE

N. 01275957

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata:

num. domanda	anno	U.P.I.C.A.	data pres. domanda	classifica
000570	95	MILANO	22 03 1995	B44D

TITOLARE VERNICIATURA INDUSTRIALE VENETA S.P .A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE BENEDUSI DELFO EZIO

INDIRIZZO BREVETTI EUROPA S.R.L.
PIAZZA BERNINI, 6
20100 MILANO

TITOLO PROCEDIMENTO PER VERNICIARE E/O DECORARE SEMILAVORATI ESTRUSI O TRAFILATI E SIMILI

INVENTORE FENZI GIANCARLO

MINISTERO dell'INDUSTRIA, del COMMERCIO e dell'ARTIGIANATO
UFFICIO ITALIANO BREVETTI E MARCHI

Roma, 24 OTTOBRE 1997

IL DIRETTORE DELLA DIV. V
F.to GIOVANNA MORELLI

22 DIC. 1997

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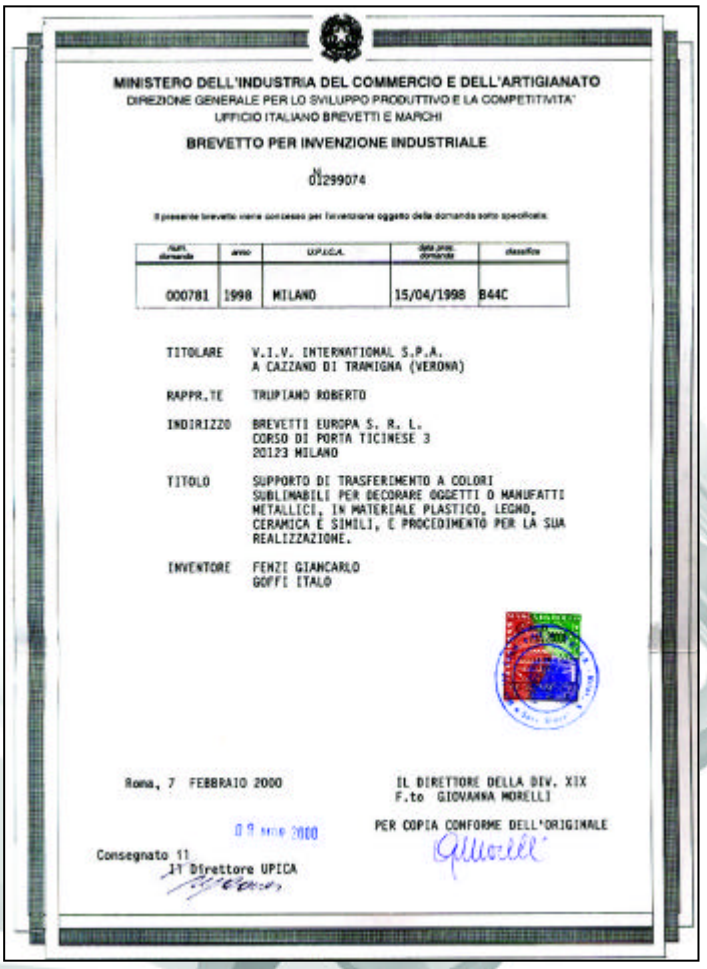


MINISTERO DELL'INDUSTRIA DEL COMMERCIO E DELL'ARTIGIANATO
DIREZIONE GENERALE PER LO SVILUPPO PRODUTTIVO E LA COMPETITIVITA'
UFFICIO ITALIANO BREVETTI E MARCHI

BREVETTO PER INVENZIONE INDUSTRIALE

N. 01299074

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata

num. domanda	anno	U.P.I.C.A.	data pres. domanda	classifica
000781	1998	MILANO	15/04/1998	B44C

TITOLARE V.I.V. INTERNATIONAL S.P.A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA S. R. L.
CORSO DI PORTA TICINESE 3
20123 MILANO

TITOLO SUPPORTO DI TRASFERIMENTO A COLORI SUBLIMABILI PER DECORARE OGGETTI O MANUFATTI METALLICI, IN MATERIALE PLASTICO, LEGNO, CERAMICA E SIMILI, E PROCEDIMENTO PER LA SUA REALIZZAZIONE.

INVENTORE FENZI GIANCARLO
GOFFI ITALO

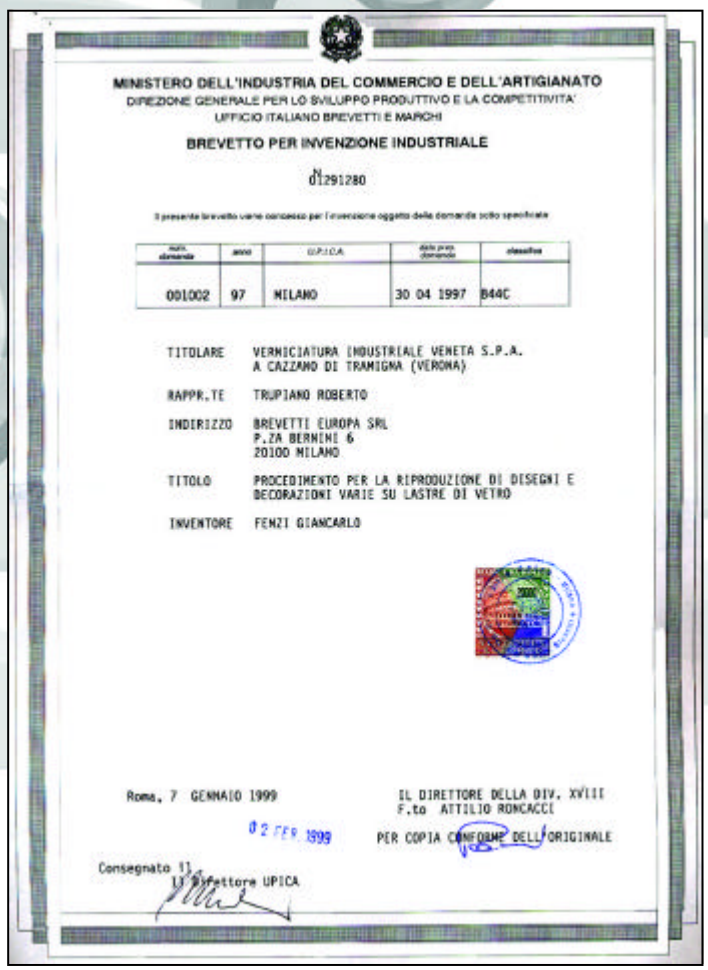
Roma, 7 FEBBRAIO 2000

IL DIRETTORE DELLA DIV. XIX
F.to GIOVANNA MORELLI

09 MAR 2000

PER COPIA CONFORME DELL'ORIGINALE

Consegnato il
Il Direttore UPICA



MINISTERO DELL'INDUSTRIA DEL COMMERCIO E DELL'ARTIGIANATO
DIREZIONE GENERALE PER LO SVILUPPO PRODUTTIVO E LA COMPETITIVITA'
UFFICIO ITALIANO BREVETTI E MARCHI

BREVETTO PER INVENZIONE INDUSTRIALE

N. 01291280

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata

num. domanda	anno	U.P.I.C.A.	data pres. domanda	classifica
001002	97	MILANO	30 04 1997	B44C

TITOLARE VERNICIATURA INDUSTRIALE VENETA S.P.A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA SRL
P.ZA BERNINI 6
20100 MILANO

TITOLO PROCEDIMENTO PER LA RIPRODUZIONE DI DISEGNI E DECORAZIONI VARIE SU LASTRE DI VETRO

INVENTORE FENZI GIANCARLO

Roma, 7 GENNAIO 1999

IL DIRETTORE DELLA DIV. XVIII
F.to ATTILIO RONCACCI

02 FEB 1999

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Consegnato il
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MINISTERO DELL'INDUSTRIA DEL COMMERCIO E DELL'ARTIGIANATO
DIREZIONE GENERALE PER LO SVILUPPO PRODUTTIVO E LA COMPETITIVITA'
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BREVETTO PER INVENZIONE INDUSTRIALE

N. 01299073

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata

num. domanda	anno	UPICA	data pres. domanda	classifica
000780	1998	MILANO	15/04/1998	B44C

TITOLARE V.I.V. INTERNATIONAL S.P.A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA S. R. L.
CORSO DI PORTA TICINESE 3
20123 MILANO

TITOLO PROCEDIMENTO PER LA PRODUZIONE DI MANUFATTI VARIAMENTE VERNICIATI E/O DECORATI MEDIANTE LA TECNICA DEL TRASFERIMENTO DA UN SUPPORTO A COLORI SUBLIMABILI.

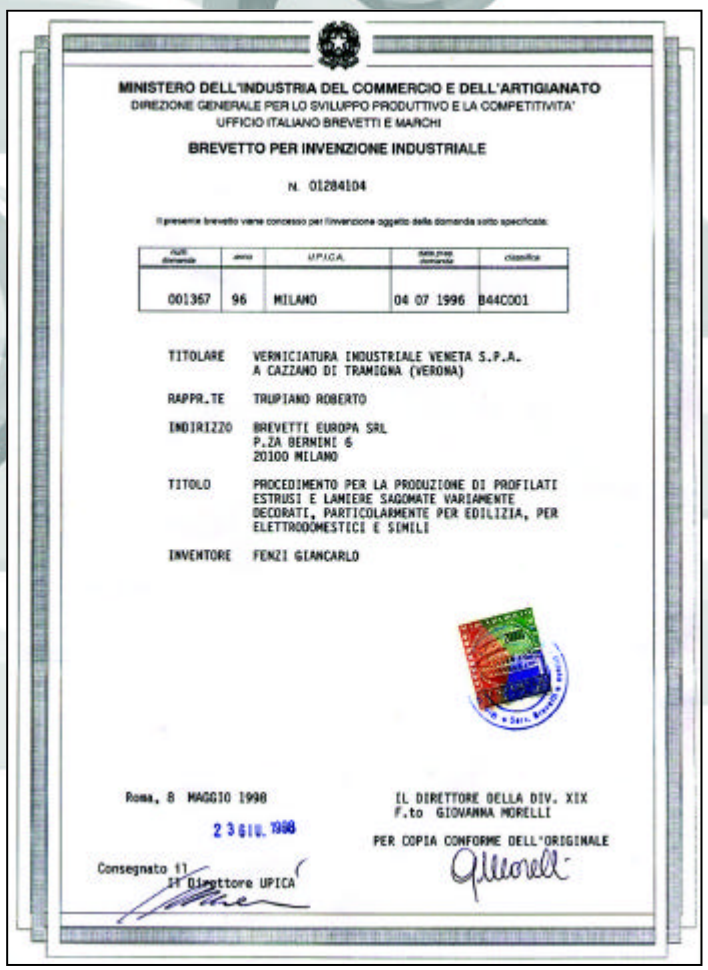
INVENTORE GOFFI ITALO
FENZI GIANCARLO

Roma, 7 FEBBRAIO 2000

IL DIRETTORE DELLA DIV. XIX
F.to GIOVANNA MORELLI

PER COPIA CONFORME DELL'ORIGINALE

Consegnato il 09 MAR 2000
Il Direttore UPICA



MINISTERO DELL'INDUSTRIA DEL COMMERCIO E DELL'ARTIGIANATO
DIREZIONE GENERALE PER LO SVILUPPO PRODUTTIVO E LA COMPETITIVITA'
UFFICIO ITALIANO BREVETTI E MARCHI

BREVETTO PER INVENZIONE INDUSTRIALE

N. 01284104

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata

num. domanda	anno	UPICA	data pres. domanda	classifica
001357	96	MILANO	04 07 1996	B44C001

TITOLARE VERNICIATURA INDUSTRIALE VENETA S.P.A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA SRL
P.ZA BERNINI 6
20100 MILANO

TITOLO PROCEDIMENTO PER LA PRODUZIONE DI PROFILATI ESTRUSI E LAMIERE SAGOMATE VARIAMENTE DECORATI, PARTICOLARMENTE PER EDILIZIA, PER ELETTRODOMESTICI E SIMILI

INVENTORE FENZI GIANCARLO

Roma, 8 MAGGIO 1998

23 GIU. 1998

IL DIRETTORE DELLA DIV. XIX
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UFFICIO ITALIANO BREVETTI E MARCHI

BREVETTO PER INVENZIONE INDUSTRIALE

N. 01283836

Il presente brevetto viene concesso per l'invenzione oggetto della domanda sotto specificata:

num. domanda	anno	UPICA	data pres. domanda	classifica
001793	96	MILANO	28 08 1996	B44C

TITOLARE VERNICIATURA INDUSTRIALE VENETA S.P .A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA SRL
P.ZA BERNINI 6
20100 MILANO

TITOLO PROCEDIMENTO PER DECORARE PROFILATI METALLICI IN MATERIALE PLASTICO E SIMILI E RELATIVA APPARECCHIATURA

INVENTORE FENZI GIANCARLO

Roma, 30 APRILE 1998

IL DIRETTORE DELLA DIV. XVIII
F.to ATTILIO RONCACCI

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Consegnato il 16 SET. 1998
Il Direttore UPICA

Austria

(19) Republik Österreich Patentamt

(10) Nummer: AT E 179 127 T1

Übersetzung der europäischen
(12) PATENTSCHRIFT
(97) Veröffentlichungsnummer: EP 0 817 728 B1

(96) Anmeldenummer: 96904794
(96) Anmeldetag: 15. 2.1996
(45) Ausgabetag: 30.12.1999

(51) Int.Cl.[6]: B44C 1/17
B41M 3/12, 5/035

(54) VERFAHREN ZUR HERSTELLUNG VON DEKORIERTEN, STRANGGEPRESSTEN PROFIELEN

(30) Priorität:
22. 3.1995 IT MI950570

(97) Veröffentlichungstag der Anmeldung:
14. 1.1998, Patentblatt 98/03

(97) Bekanntmachung des Hinweises auf die Patenterteilung:
21. 4.1999, Patentblatt 99/16

(84) Benannte Vertragsstaaten:
AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE
Erweiterung auf SI

(56) Entgegenhaltungen:
EP-A -0252610 EP-A -0641675 FR-A -2470007
US-A -3264158 US-A -3484342 US-A -4328058
EP-A -0453957 DE-A -3005175 FR-A -2307029
US-A -3340121 US-A -3860901 US-A -5063085
CER ERM : "LA DECORATION DES OBJETS PAR SUBLIMATION", OCTOBER 1992
A LETTER AND INVOICES OF 1993 AND 1994, RELATING TO THE USE OF DECORATION ON LARGE METAL ARTICLES BY TRANSFER PAPER

(73) Patentinhaber:
V.I.V. INTERNATIONAL S.P.A.
VIA COSTEGGIOLA
37030 CAZZANO DI TRAMIGNA VR (IT).

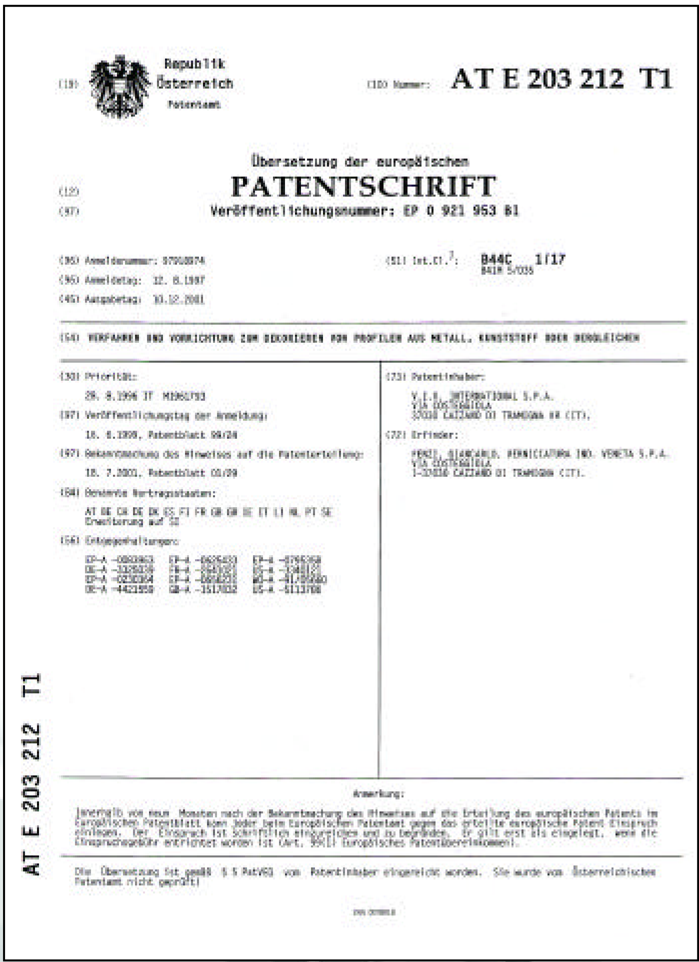
(72) Erfinder:
FENZI, GIANCARLO
VIA COSTEGGIOLA
I-37030 CAZZANO DI TRAMIGNA (IT).

AT E 179 127 T1

Anmerkung:

Innerhalb von neun Monaten nach der Bekanntmachung des Hinweises auf die Erteilung des europäischen Patents im Europäischen Patentblatt kann jeder beim Europäischen Patentamt gegen das erteilte europäische Patent Einspruch einlegen. Der Einspruch ist schriftlich einzureichen und zu begründen. Er gilt erst als eingelegt, wenn die Einspruchsgebühr entrichtet worden ist (Art. 99(1) Europäisches Patentübereinkommen).

Die Übersetzung ist gemäß § 5 PatVEG vom Patentinhaber eingereicht worden. Sie wurde vom Österreichischen Patentamt nicht geprüft!



(19) Republik Österreich Patentamt

(10) Nummer: **AT E 203 212 T1**

Übersetzung der europäischen

(12) **PATENTSCHRIFT**

(97) Veröffentlichungsnummer: EP 0 921 953 B1

(51) Int.Cl.[7]: B44C 1/17

(54) VERFAHREN UND VORRICHTUNG ZUM DEKORIEREN VON PROFILEN AUS METALL, KUNSTSTOFF ODER DERGLEICHEN

(30) Priorität:

(97) Veröffentlichungstag der Anmeldung:

(97) Bekanntmachung des Hinweises auf die Patenterteilung:

(84) Benannte Vertragsstaaten:

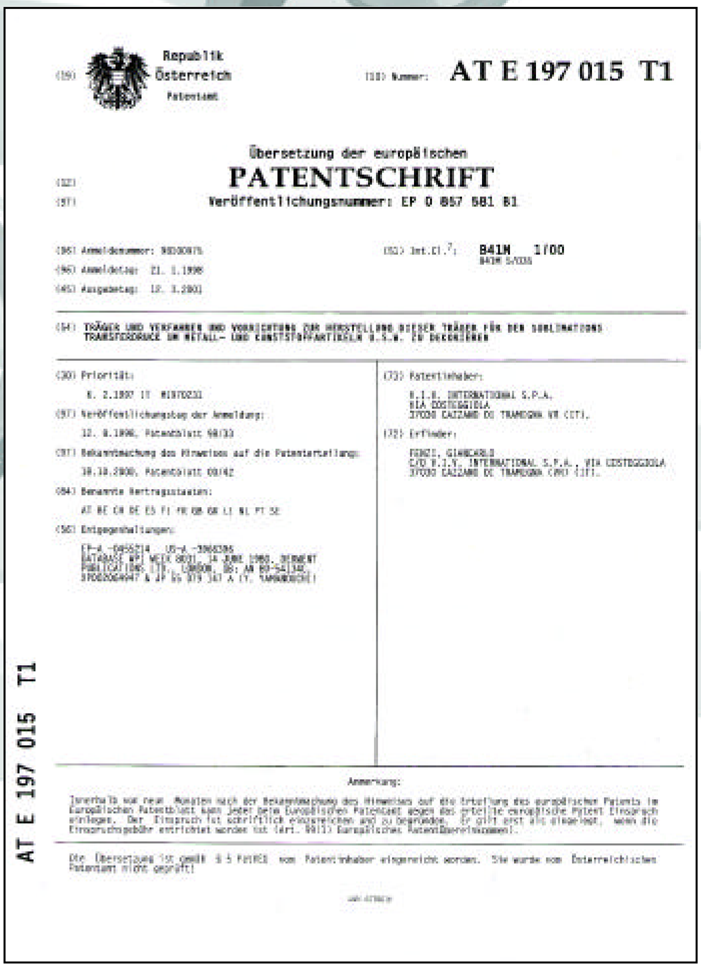
(56) Entgegenhaltungen:

(73) Patentinhaber:

(72) Erfinder:

AT E 203 212 T1

Anmerkung:



(19) Republik Österreich Patentamt

(10) Nummer: **AT E 197 015 T1**

Übersetzung der europäischen

(12) **PATENTSCHRIFT**

(97) Veröffentlichungsnummer: EP 0 857 581 B1

(51) Int.Cl.[7]: B41M 1/00

(30) Priorität:

(97) Veröffentlichungstag der Anmeldung:

(97) Bekanntmachung des Hinweises auf die Patenterteilung:

(84) Benannte Vertragsstaaten:

(56) Entgegenhaltungen:

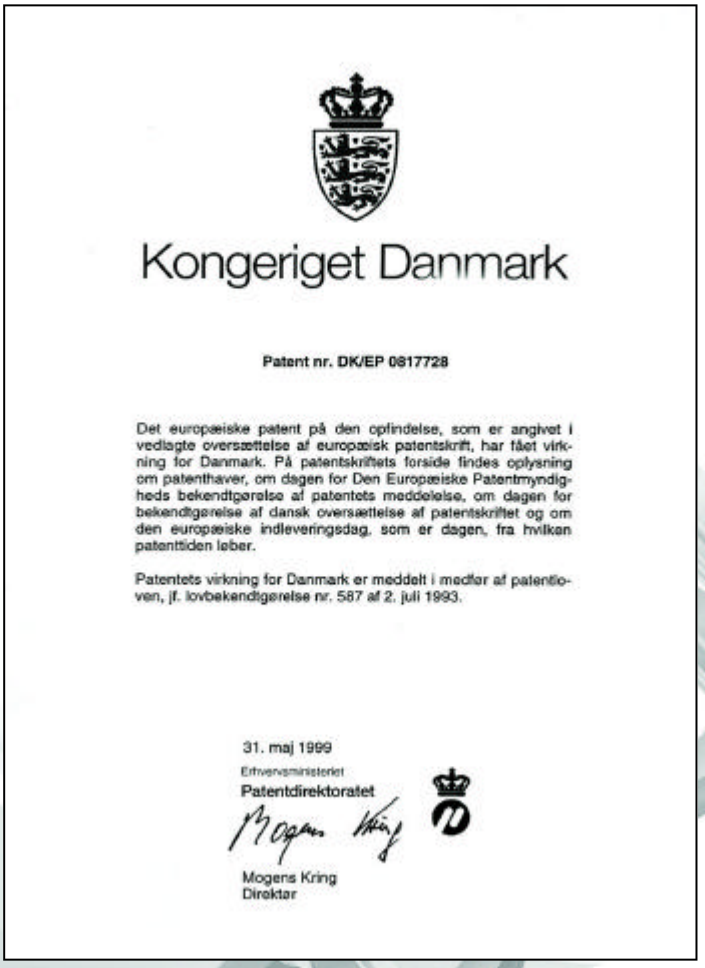
(73) Patentinhaber:

(72) Erfinder:

AT E 197 015 T1

Anmerkung:

Danmark



Kongeriget Danmark

Patent nr. DK/EP 0817728

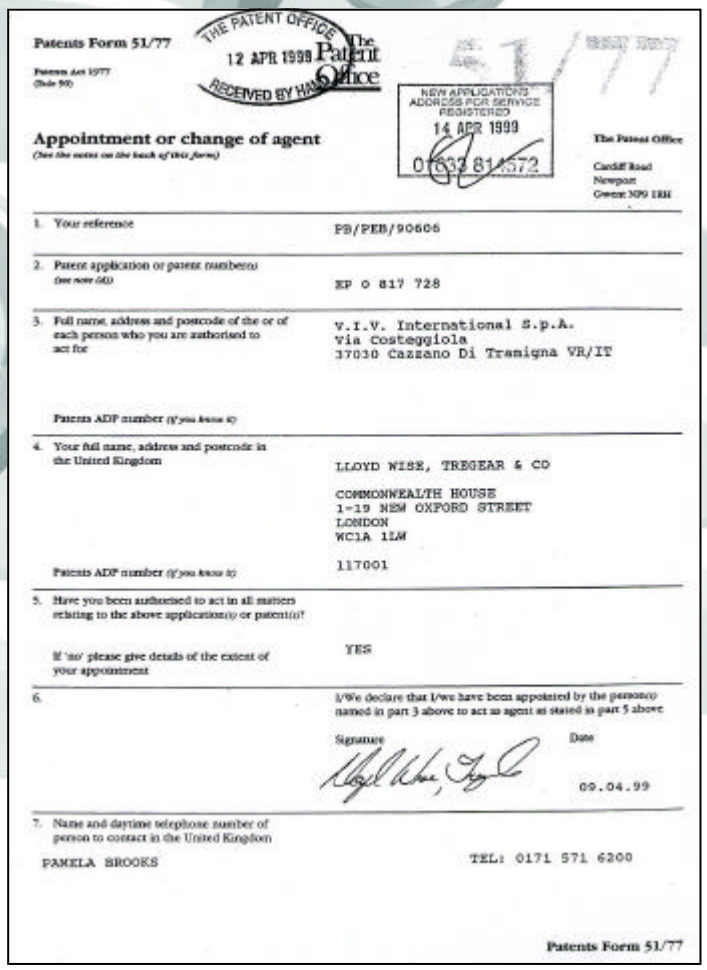
Det europæiske patent på den opfindelse, som er anghvet i vedlagte oversættelse af europæisk patentskrift, har fået virkning for Danmark. På patentskriftets forside findes oplysning om patenthaver, om dagen for Den Europæiske Patentmyndigheds bekendtgørelse af patentets meddelelse, om dagen for bekendtgørelse af dansk oversættelse af patentskriftet og om den europæiske indleveringsdag, som er dagen, fra hvilken patenttiden løber.

Patentets virkning for Danmark er meddelt i medfør af patentloven, jf. lovbekendtgørelse nr. 587 af 2. juli 1993.

31. maj 1999
Erhvervsministeriet
Patentdirektoratet

Mogens Kring
Direktør

Great Britain



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Patents Act 1977
(Rule 90)

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12 APR 1999
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14 APR 1999
01633 814572

The Patent Office
Cardiff Road
Newport
Gwent NP9 1RH

Appointment or change of agent
(See the notes on the back of this form)

1. Your reference — PB/PEB/90606

2. Patent application or patent number(s) *(see note 6(i))* — EP 0 817 728

3. Full name, address and postcode of the or of each person who you are authorised to act for — V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR/IT

Patents ADP number *(if you know it)*

4. Your full name, address and postcode in the United Kingdom — LLOYD WISE, TREGEAR & CO
COMMONWEALTH HOUSE
1-19 NEW OXFORD STREET
LONDON
WC1A 1LW

Patents ADP number *(if you know it)* — 117001

5. Have you been authorised to act in all matters relating to the above application(s) or patent(s)? — YES

If 'no' please give details of the extent of your appointment

6. I/We declare that I/we have been appointed by the person(s) named in part 3 above to act as agent as stated in part 5 above

Signature — Date — 09.04.99

7. Name and daytime telephone number of person to contact in the United Kingdom
PAMELA BROOKS — TEL: 0171 571 6200

Patents Form 51/77

Patents

Greece

ΟΡΓΑΝΙΣΜΟΣ ΒΙΟΜΗΧΑΝΙΚΗΣ ΙΔΙΟΚΤΗΣΙΑΣ

ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΚΑΤΑΘΕΣΗΣ ΜΕΤΑΦΡΑΣΗΣ
ΕΥΡΩΠΑΪΚΟΥ ΔΙΠΛΩΜΑΤΟΣ ΕΥΡΕΣΙΤΕΧΝΙΑΣ

Αριθμ. 3030240

Εχοντας υπόψη :

α) το νόμο 1733/87 "Μεταφορά τεχνολογίας, εφευρέσεις, τεχνολογική καινοτομία και σύσταση Επιτροπής Ατομικής Ενέργειας"

β) το υε' αρ. 77/88 Προεδρικό Διάταγμα "Διατάξεις εφαρμογής της Σύμβασης για τη χορήγηση Ευρωπαϊκών Διπλωμάτων Ευρεσιτεχνίας που κυρώθηκε με το νόμο 1607/86".

γ) την αίτηση κατάθεσης της μετάφρασης Ευρωπαϊκού Διπλώματος Ευρεσιτεχνίας που κατέθεσε ο ενδιαφερόμενος στον Ο.Β.Ι. στις **14-05-1999** με αριθμό **990401329**.

Πιστοποιούμε

ότι τηρήθηκαν οι όροι κανονικής κατάθεσης της μετάφρασής του και έχει ισχύ στην Ελλάδα το Ευρωπαϊκό Δίπλωμα Ευρεσιτεχνίας με τα εξής στοιχεία:

Αριθμός/Ημερομηνία Δημοσίευσης: 817728/21-04-1999
Αριθμός/Ημερομηνία Κατάθεσης: 96904794.3/15-02-1996
Δικαιούχος: **V.I.V. INTERNATIONAL S.P.A.**
VIA COSTEGGIOLA
37030 CAZZANO DI TRAMIGNA VR ITALY

Τίτλος: " ΔΙΑΔΙΚΑΣΙΑ ΓΙΑ ΤΗΝ ΚΑΤΑΣΚΕΥΗ ΔΙΑΚΟΣΜΗΜΕΝΩΝ, ΕΞΩΘΗΜΕΝΩΝ ΣΤΟΙΧΕΙΩΝ ΔΙΑΤΟΜΗΣ "

Αριθμ. Προτ.: MI960570/22-03-95/IT

Εφευρέτης: FENZI GIANCARLO

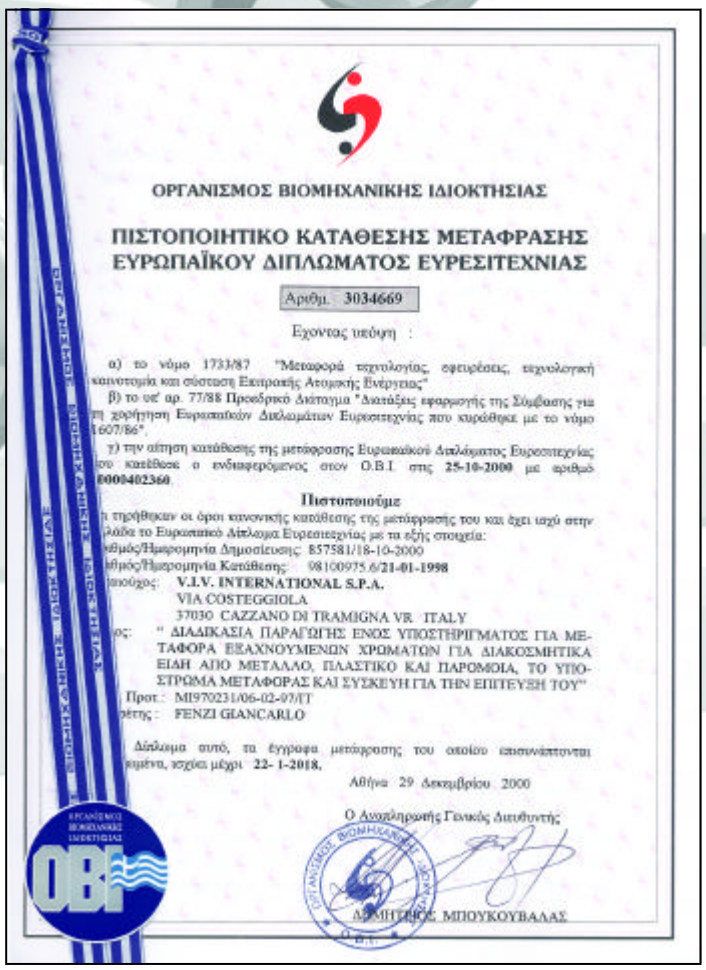
Το δίπλωμα αυτό, τα έγγραφα μετάφρασης του οποίου επισυνάπτονται επικυρωμένα, ισχύει μέχρι **16- 2-2016.**

Αθήνα 30 Ιουλίου 1999

Ο Γενικός Διευθυντής

ΚΩΝΣΤΑΝΤΙΝΟΣ ΚΟΓΙΑΣ

Greece



ΟΡΓΑΝΙΣΜΟΣ ΒΙΟΜΗΧΑΝΙΚΗΣ ΙΔΙΟΚΤΗΣΙΑΣ

ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΚΑΤΑΘΕΣΗΣ ΜΕΤΑΦΡΑΣΗΣ
ΕΥΡΩΠΑΪΚΟΥ ΔΙΠΛΩΜΑΤΟΣ ΕΥΡΕΣΙΤΕΧΝΙΑΣ

Αριθμ. 3034669

Εχοντας υπόψη :

α) το νόμο 1733/87 "Μεταφορά τεχνολογίας, εφευρέσεις, τεχνολογική καινοτομία και σύσταση Επιτροπής Ατομικής Ενέργειας"

β) το υε' αρ. 77/88 Προεδρικό Διάταγμα "Διατάξεις εφαρμογής της Σύμβασης για τη χορήγηση Ευρωπαϊκών Διπλωμάτων Ευρεσιτεχνίας που κυρώθηκε με το νόμο 1607/86".

γ) την αίτηση κατάθεσης της μετάφρασης Ευρωπαϊκού Διπλώματος Ευρεσιτεχνίας που κατέθεσε ο ενδιαφερόμενος στον Ο.Β.Ι. στις **25-10-2000** με αριθμό **0000402360**.

Πιστοποιούμε

ότι τηρήθηκαν οι όροι κανονικής κατάθεσης της μετάφρασής του και έχει ισχύ στην Ελλάδα το Ευρωπαϊκό Δίπλωμα Ευρεσιτεχνίας με τα εξής στοιχεία:

Αριθμός/Ημερομηνία Δημοσίευσης: 857581/18-10-2000
Αριθμός/Ημερομηνία Κατάθεσης: 08100975.6/**21-01-1998**
Δικαιούχος: **V.I.V. INTERNATIONAL S.P.A.**
VIA COSTEGGIOLA
37030 CAZZANO DI TRAMIGNA VR ITALY

Τίτλος: " ΔΙΑΔΙΚΑΣΙΑ ΠΑΡΑΓΩΓΗΣ ΕΝΟΣ ΥΠΟΣΤΗΡΙΓΜΑΤΟΣ ΓΙΑ ΜΕΤΑΦΟΡΑ ΕΞΑΧΝΟΥΜΕΝΩΝ ΧΡΩΜΑΤΩΝ ΓΙΑ ΔΙΑΚΟΣΜΗΤΙΚΑ ΕΙΔΗ ΑΠΟ ΜΕΤΑΛΛΟ, ΠΛΑΣΤΙΚΟ ΚΑΙ ΠΑΡΟΜΟΙΑ, ΤΟ ΥΠΟΣΤΡΩΜΑ ΜΕΤΑΦΟΡΑΣ ΚΑΙ ΣΥΣΚΕΥΗ ΓΙΑ ΤΗΝ ΕΠΙΤΕΥΞΗ ΤΟΥ"

Αριθμ. Προτ.: MI970231/06-02-97/IT

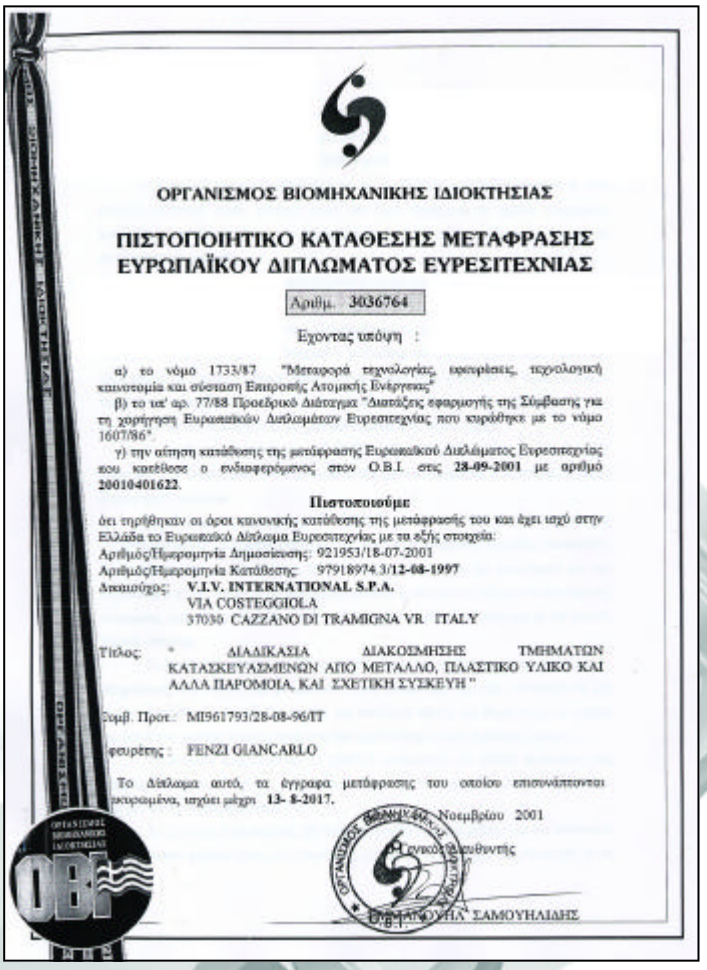
Εφευρέτης: FENZI GIANCARLO

Το Δίπλωμα αυτό, τα έγγραφα μετάφρασης του οποίου επισυνάπτονται επικυρωμένα, ισχύει μέχρι **22- 1-2018.**

Αθήνα 29 Δεκεμβρίου 2000

Ο Αναπληρωτής Γενικός Διευθυντής

ΔΗΜΗΤΡΙΟΣ ΜΠΟΥΚΟΥΒΑΛΑΣ



ΟΡΓΑΝΙΣΜΟΣ ΒΙΟΜΗΧΑΝΙΚΗΣ ΙΔΙΟΚΤΗΣΙΑΣ

ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΚΑΤΑΘΕΣΗΣ ΜΕΤΑΦΡΑΣΗΣ ΕΥΡΩΠΑΪΚΟΥ ΔΙΠΛΩΜΑΤΟΣ ΕΥΡΕΣΙΤΕΧΝΙΑΣ

Αριθμ. **3036764**

Εχοντας υπόψη :

α) το νόμο 1733/87 "Μεταφορά τεχνολογίας, ερευνήσεις, τεχνολογική καινοτομία και σύσταση Επιτροπής Ατομικής Ενέργειας"
β) το υπ' αρ. 77/88 Προεδρικό Διάταγμα "Διατάξεις εφαρμογής της Σύμβασης για τη χορήγηση Ευρωπαϊκών Διπλωμάτων Ευρεσιτεχνίας που κυρώθηκε με το νόμο 1607/86".
γ) την αίτηση κατάθεσης της μετάφρασης Ευρωπαϊκού Διπλώματος Ευρεσιτεχνίας που κατέθεσε ο ενδιαφερόμενος στον Ο.Β.Ι. στις **28-09-2001** με αριθμό **20010401622**.

Πιστοποιούμε

ότι τηρήθηκαν οι όροι κανονικής κατάθεσης της μετάφρασής του και έχει ισχύ στην Ελλάδα το Ευρωπαϊκό Δίπλωμα Ευρεσιτεχνίας με τα εξής στοιχεία:
Αριθμός/Ημερομηνία Δημοσίευσης: 921953/18-07-2001
Αριθμός/Ημερομηνία Κατάθεσης: 97918974.3/**12-08-1997**
Δικαιούχος: **V.I.V. INTERNATIONAL S.P.A.**
VIA COSTEGGIOLA
37030 CAZZANO DI TRAMIGNA VR ITALY

Τίτλος: " ΔΙΑΔΙΚΑΣΙΑ ΔΙΑΚΟΣΜΗΣΗΣ ΤΜΗΜΑΤΩΝ ΚΑΤΑΣΚΕΥΑΣΜΕΝΩΝ ΑΠΟ ΜΕΤΑΛΛΟ, ΠΛΑΣΤΙΚΟ ΥΛΙΚΟ ΚΑΙ ΑΛΛΑ ΠΑΡΟΜΟΙΑ, ΚΑΙ ΣΧΕΤΙΚΗ ΣΥΣΚΕΥΗ "

Συμβ. Προτ.: MI961793/28-08-96/IT

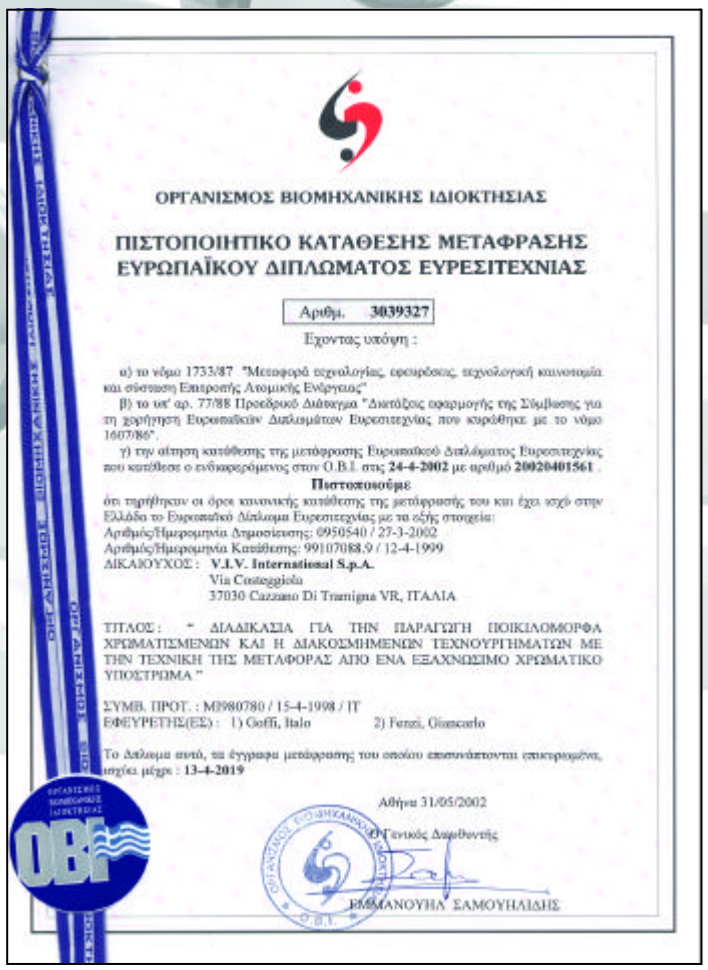
Εφευρέτης : FENZI GIANCARLO

Το Δίπλωμα αυτό, τα έγγραφα μετάφρασης του οποίου επισυνάπτονται κεκυρωμένα, ισχύει μέχρι **13- 8-2017.**

Αθήνα 30 Νοεμβρίου 2001

Ο Γενικός Διευθυντής

ΕΜΜΑΝΟΥΗΛ ΣΑΜΟΥΗΛΙΔΗΣ



ΟΡΓΑΝΙΣΜΟΣ ΒΙΟΜΗΧΑΝΙΚΗΣ ΙΔΙΟΚΤΗΣΙΑΣ

ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΚΑΤΑΘΕΣΗΣ ΜΕΤΑΦΡΑΣΗΣ ΕΥΡΩΠΑΪΚΟΥ ΔΙΠΛΩΜΑΤΟΣ ΕΥΡΕΣΙΤΕΧΝΙΑΣ

Αριθμ. **3039327**

Εχοντας υπόψη :

α) το νόμο 1733/87 "Μεταφορά τεχνολογίας, ερευνήσεις, τεχνολογική καινοτομία και σύσταση Επιτροπής Ατομικής Ενέργειας"
β) το υπ' αρ. 77/88 Προεδρικό Διάταγμα "Διατάξεις εφαρμογής της Σύμβασης για τη χορήγηση Ευρωπαϊκών Διπλωμάτων Ευρεσιτεχνίας που κυρώθηκε με το νόμο 1607/86".
γ) την αίτηση κατάθεσης της μετάφρασης Ευρωπαϊκού Διπλώματος Ευρεσιτεχνίας που κατέθεσε ο ενδιαφερόμενος στον Ο.Β.Ι. στις **24-4-2002** με αριθμό **20020401561** .

Πιστοποιούμε

ότι τηρήθηκαν οι όροι κανονικής κατάθεσης της μετάφρασής του και έχει ισχύ στην Ελλάδα το Ευρωπαϊκό Δίπλωμα Ευρεσιτεχνίας με τα εξής στοιχεία:
Αριθμός/Ημερομηνία Δημοσίευσης: 0950540 / 27-3-2002
Αριθμός/Ημερομηνία Κατάθεσης: 99107088.9 / 12-4-1999
ΔΙΚΑΙΟΥΧΟΣ : **V.I.V. International S.p.A.**
Via Costeggiola
37030 Cazzano Di Tramigna VR, ΙΤΑΛΙΑ

ΤΙΤΛΟΣ : " ΔΙΑΔΙΚΑΣΙΑ ΓΙΑ ΤΗΝ ΠΑΡΑΓΩΓΗ ΠΟΙΚΙΛΟΜΟΡΦΑ ΧΡΩΜΑΤΙΣΜΕΝΩΝ ΚΑΙ Η ΔΙΑΚΟΣΜΗΜΕΝΩΝ ΤΕΧΝΟΥΡΓΗΜΑΤΩΝ ΜΕ ΤΗΝ ΤΕΧΝΙΚΗ ΤΗΣ ΜΕΤΑΦΟΡΑΣ ΑΠΟ ΕΝΑ ΕΞΑΧΝΩΣΙΜΟ ΧΡΩΜΑΤΙΚΟ ΥΠΟΣΤΡΩΜΑ "

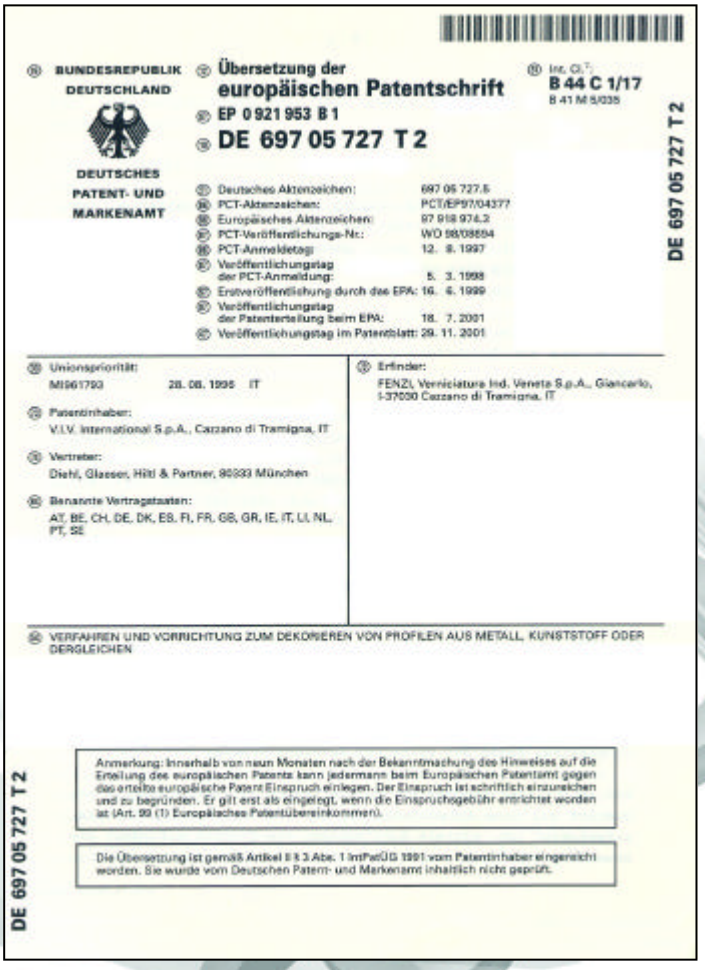
ΣΥΜΒ. ΠΡΟΤ. : MI980780 / 15-4-1998 / IT
ΕΦΕΥΡΕΤΗΣ(ΕΣ) : 1) Goffi, Italo 2) Fenzi, Giancarlo

Το Δίπλωμα αυτό, τα έγγραφα μετάφρασης του οποίου επισυνάπτονται επικυρωμένα, ισχύει μέχρι : **13-4-2019**

Αθήνα 31/05/2002

Ο Γενικός Διευθυντής

ΕΜΜΑΝΟΥΗΛ ΣΑΜΟΥΗΛΙΔΗΣ



(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENT- UND MARKENAMT

(12) Übersetzung der europäischen Patentschrift

(51) Int. Cl.[7]: B 44 C 1/17
B 41 M 5/035

(10) EP 0 921 953 B 1

(11) DE 697 05 727 T 2

DE 697 05 727 T 2

(21) Deutsches Aktenzeichen: 697 05 727.6
(86) PCT-Aktenzeichen: PCT/EP97/04377
(87) Europäisches Aktenzeichen: 97 918 974.3
(87) PCT-Veröffentlichungs-Nr.: WO 98/08694
(86) PCT-Anmeldetag: 12. 8. 1997
(87) Veröffentlichungstag der PCT-Anmeldung: 5. 3. 1998
(97) Erstveröffentlichung durch das EPA: 16. 6. 1999
(97) Veröffentlichungstag der Patenterteilung beim EPA: 18. 7. 2001
(47) Veröffentlichungstag im Patentblatt: 29. 11. 2001

(30) Unionspriorität:
MI961793 28. 08. 1996 IT

(73) Patentinhaber:
V.I.V. International S.p.A., Cazzano di Tramigna, IT

(74) Vertreter:
Diehl, Glaeser, Hiltl & Partner, 80333 München

(84) Benannte Vertragstaaten:
AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, NL, PT, SE

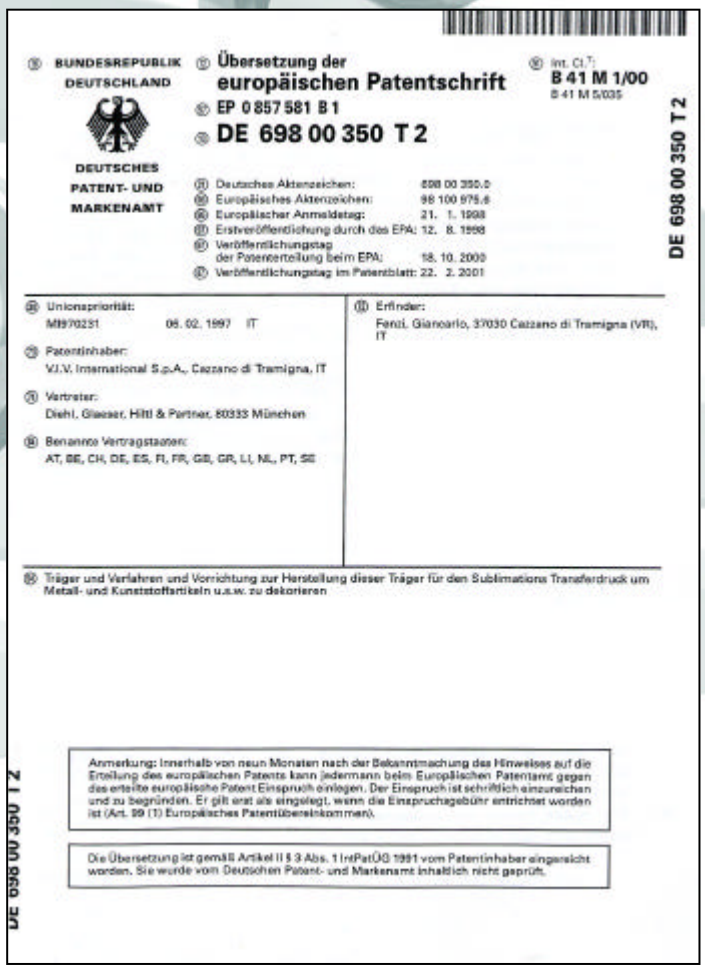
(72) Erfinder:
FENZI Verniciatura Ind. Veneta S.p.A., Giancarlo, I-37030 Cazzano di Tramigna, IT

(54) VERFAHREN UND VORRICHTUNG ZUM DEKORIEREN VON PROFILEN AUS METALL, KUNSTSTOFF ODER DERGLEICHEN

Anmerkung: Innerhalb von neun Monaten nach der Bekanntmachung des Hinweises auf die Erteilung des europäischen Patents kann jedermann beim Europäischen Patentamt gegen das erteilte europäische Patent Einspruch einlegen. Der Einspruch ist schriftlich einzureichen und zu begründen. Er gilt erst als eingelegt, wenn die Einspruchsgebühr entrichtet worden ist (Art. 99 (1) Europäisches Patentübereinkommen).

Die Übersetzung ist gemäß Artikel II § 3 Abs. 1 IntPatÜG 1991 vom Patentinhaber eingereicht worden. Sie wurde vom Deutschen Patent- und Markenamt inhaltlich nicht geprüft.

DE 697 05 727 T 2



(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENT- UND MARKENAMT

(12) Übersetzung der europäischen Patentschrift

(51) Int. Cl.[7]: B 41 M 1/00
B 41 M 5/035

(10) EP 0 857 581 B 1

(11) DE 698 00 350 T 2

DE 698 00 350 T 2

(21) Deutsches Aktenzeichen: 698 00 350.0
(86) Europäisches Aktenzeichen: 98 100 975.6
(86) Europäischer Anmeldetag: 21. 1. 1998
(87) Erstveröffentlichung durch das EPA: 12. 8. 1998
(97) Veröffentlichungstag der Patenterteilung beim EPA: 18. 10. 2000
(47) Veröffentlichungstag im Patentblatt: 22. 2. 2001

(30) Unionspriorität:
MI970231 06. 02. 1997 IT

(73) Patentinhaber:
V.I.V. International S.p.A., Cazzano di Tramigna, IT

(74) Vertreter:
Diehl, Glaeser, Hiltl & Partner, 80333 München

(84) Benannte Vertragstaaten:
AT, BE, CH, DE, ES, FI, FR, GB, GR, LI, NL, PT, SE

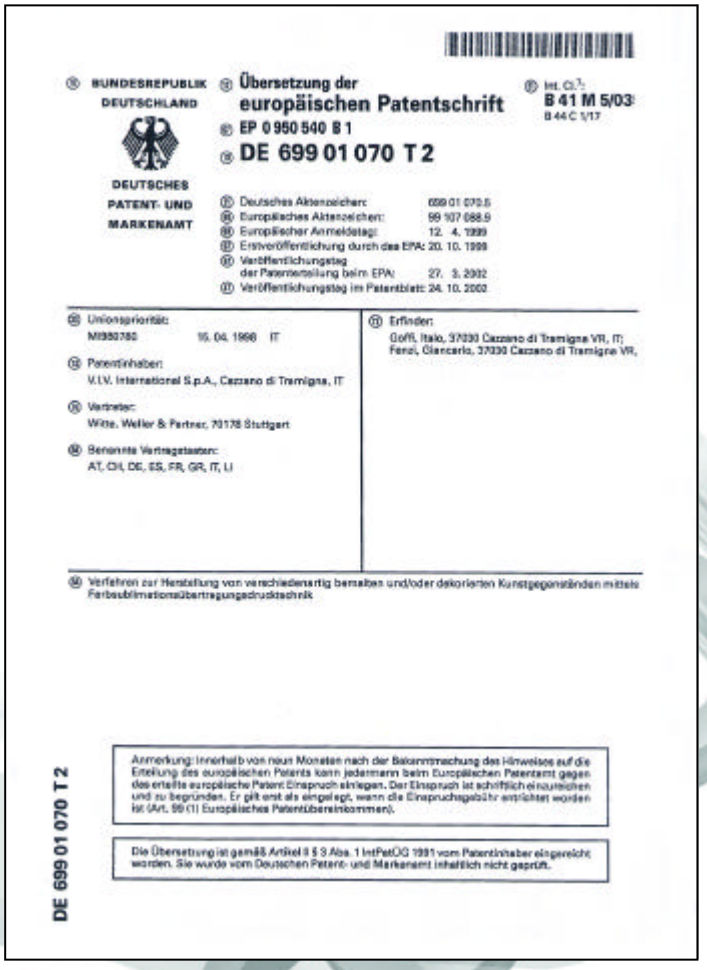
(72) Erfinder:
Fenzi, Giancarlo, 37030 Cazzano di Tramigna (VR), IT

(54) Träger und Verfahren und Vorrichtung zur Herstellung dieser Träger für den Sublimations Transferdruck um Metall- und Kunststoffartikeln u.s.w. zu dekorieren

Anmerkung: Innerhalb von neun Monaten nach der Bekanntmachung des Hinweises auf die Erteilung des europäischen Patents kann jedermann beim Europäischen Patentamt gegen das erteilte europäische Patent Einspruch einlegen. Der Einspruch ist schriftlich einzureichen und zu begründen. Er gilt erst als eingelegt, wenn die Einspruchsgebühr entrichtet worden ist (Art. 99 (1) Europäisches Patentübereinkommen).

Die Übersetzung ist gemäß Artikel II § 3 Abs. 1 IntPatÜG 1991 vom Patentinhaber eingereicht worden. Sie wurde vom Deutschen Patent- und Markenamt inhaltlich nicht geprüft.

DE 698 00 350 T 2



(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENT- UND MARKENAMT

(12) Übersetzung der europäischen Patentschrift

(51) Int. Cl.[7]: B 41 M 5/03
B 44 C 1/17

(97) EP 0 950 540 B 1

(15) DE 699 01 070 T 2

(21) Deutsches Aktenzeichen: 699 01 070.5
(96) Europäisches Aktenzeichen: 99 107 088.9
(96) Europäischer Anmeldetag: 12. 4. 1999
(97) Erstveröffentlichung durch das EPA: 20. 10. 1999
(47) Veröffentlichungstag der Patenterteilung beim EPA: 27. 3. 2002
(48) Veröffentlichungstag im Patentblatt: 24. 10. 2002

(30) Unionspriorität:
MI980780 16. 04. 1998 IT

(73) Patentinhaber:
V.L.V. International S.p.A., Cazzano di Tramigna, IT

(74) Vertreter:
Witte, Weller & Partner, 70178 Stuttgart

(84) Benannte Vertragstaaten:
AT, CH, DE, ES, FR, GR, IT, LI

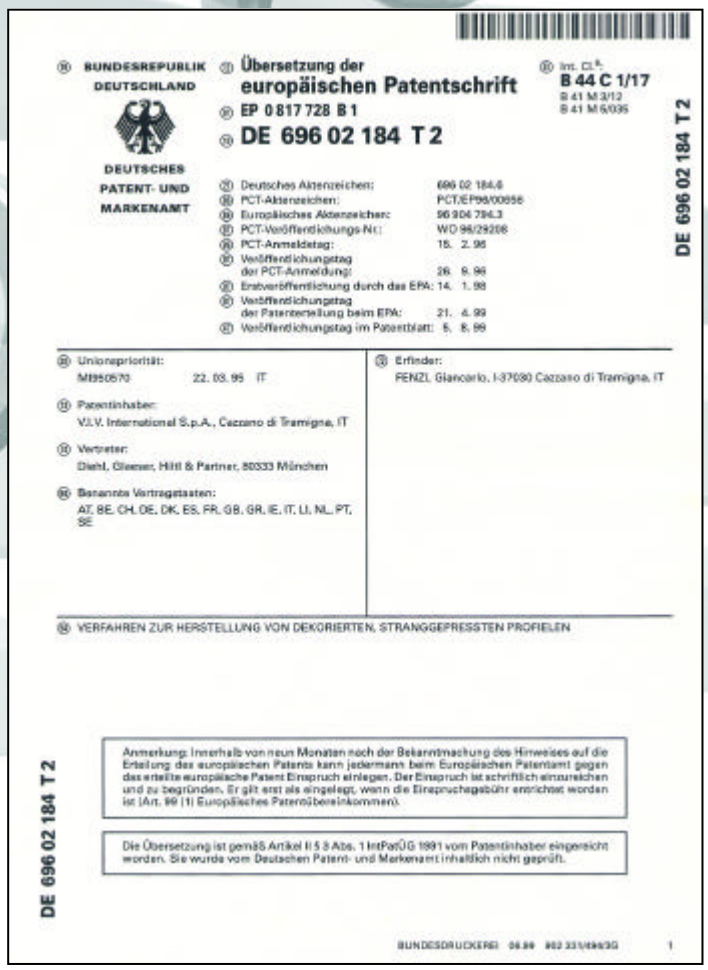
(72) Erfinder:
Goffi, Italo, 37030 Cazzano di Tramigna VR, IT;
Fenzi, Giancarlo, 37030 Cazzano di Tramigna VR,

(54) Verfahren zur Herstellung von verschiedenartig bemalten und/oder dekorierten Kunstgegenständen mittels Farbsublimationsübertragungsdruckschrift

DE 699 01 070 T 2

Anmerkung: Innerhalb von neun Monaten nach der Bekanntmachung des Hinweises auf die Erteilung des europäischen Patents kann jedermann beim Europäischen Patentamt gegen das erteilte europäische Patent Einspruch einlegen. Der Einspruch ist schriftlich einzureichen und zu begründen. Er gilt erst als eingelegt, wenn die Einspruchsgebühr entrichtet worden ist (Art. 99 (1) Europäisches Patentübereinkommen).

Die Übersetzung ist gemäß Artikel II § 3 Abs. 1 IntPatÜG 1991 vom Patentinhaber eingereicht worden. Sie wurde vom Deutschen Patent- und Markenamt inhaltlich nicht geprüft.



(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENT- UND MARKENAMT

(12) Übersetzung der europäischen Patentschrift

(51) Int. Cl.[6]: B 44 C 1/17
B 41 M 3/12
B 41 M 5/035

(97) EP 0 817 728 B 1

(15) DE 696 02 184 T 2

(21) Deutsches Aktenzeichen: 696 02 184.6
(86) PCT-Aktenzeichen: PCT/EP96/00856
(96) Europäisches Aktenzeichen: 96 904 784.3
(87) PCT-Veröffentlichungs-Nr.: WO 96/29208
(86) PCT-Anmeldetag: 15. 2. 96
(87) Veröffentlichungstag der PCT-Anmeldung: 26. 9. 96
(97) Erstveröffentlichung durch das EPA: 14. 1. 98
(97) Veröffentlichungstag der Patenterteilung beim EPA: 21. 4. 99
(47) Veröffentlichungstag im Patentblatt: 5. 8. 99

(30) Unionspriorität:
MI950570 22. 03. 95 IT

(73) Patentinhaber:
V.L.V. International S.p.A., Cazzano di Tramigna, IT

(74) Vertreter:
Diehl, Glaeser, Hiltl & Partner, 80333 München

(84) Benannte Vertragstaaten:
AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE

(72) Erfinder:
PENZI, Giancarlo, I-37030 Cazzano di Tramigna, IT

(54) VERFAHREN ZUR HERSTELLUNG VON DEKORIERTEN, STRANGGEPRESSTEN PROFILEN

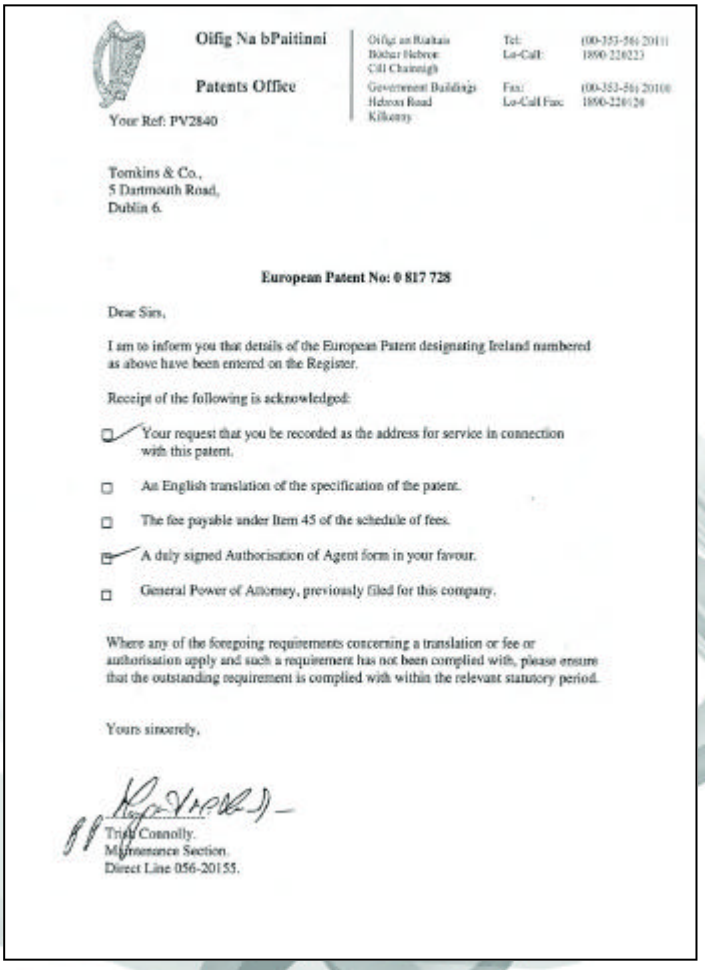
DE 696 02 184 T 2

Anmerkung: Innerhalb von neun Monaten nach der Bekanntmachung des Hinweises auf die Erteilung des europäischen Patents kann jedermann beim Europäischen Patentamt gegen das erteilte europäische Patent Einspruch einlegen. Der Einspruch ist schriftlich einzureichen und zu begründen. Er gilt erst als eingelegt, wenn die Einspruchsgebühr entrichtet worden ist (Art. 99 (1) Europäisches Patentübereinkommen).

Die Übersetzung ist gemäß Artikel II § 3 Abs. 1 IntPatÜG 1991 vom Patentinhaber eingereicht worden. Sie wurde vom Deutschen Patent- und Markenamt inhaltlich nicht geprüft.

BUNDESDRUCKEREI 06.99 902 331/494/3G 1

Ireland



Oifig Na bPaitinni

Patents Office

Your Ref: PV2840

Oifig an Ríaltais
Bóthar Hebron
Cill Chainnigh
Government Buildings
Hebron Road
Kilkenny

Tel: (00-353-56) 20111
Lo-Call: 1890 220223
Fax: (00-353-56) 20108
Lo-Call Fax: 1890 220128

Tomkins & Co.,
5 Dartmouth Road,
Dublin 6.

European Patent No: 0 817 728

Dear Sirs,

I am to inform you that details of the European Patent designating Ireland numbered as above have been entered on the Register.

Receipt of the following is acknowledged:

- [x] Your request that you be recorded as the address for service in connection with this patent.
- [ ] An English translation of the specification of the patent.
- [ ] The fee payable under Item 45 of the schedule of fees.
- [x] A duly signed Authorisation of Agent form in your favour.
- [ ] General Power of Attorney, previously filed for this company.

Where any of the foregoing requirements concerning a translation or fee or authorisation apply and such a requirement has not been complied with, please ensure that the outstanding requirement is complied with within the relevant statutory period.

Yours sincerely,

Trish Connolly.
Maintenance Section.
Direct Line 056-20155.

Norway

KONGERIKET NORGE

PATENTBREV

Det bekreftes herved at Styret for det industrielle rettsvern i medhold av lov nr. 9 av 15. desember 1967 om patenter har meddelt patent som angitt i vedheftede patentskrift.

Direktør

Poland

URZĄD PATENTOWY
RZECZYPOSPOLITEJ POLSKIEJ

Dokument patentowy

NA MOCY USTAWY Z DNIA 19 PAŹDZIERNIKA 1972 R.
O WYNALAZCZOŚCI (DZ. U. NR 26 Z 1993 R., POZ. 117)
ZOSTAŁ UDZIELONY NA RZECZ

VERNICIATURA INDUSTRIALE VENETA S.P.A.,
Cazzano di Tramigna, Włochy

PATENT

NR 180039

NA WYNALAZEK PT.
Sposób i urządzenie do wytwarzania
dekorowanych, profilowych elementów
wytłaczanych

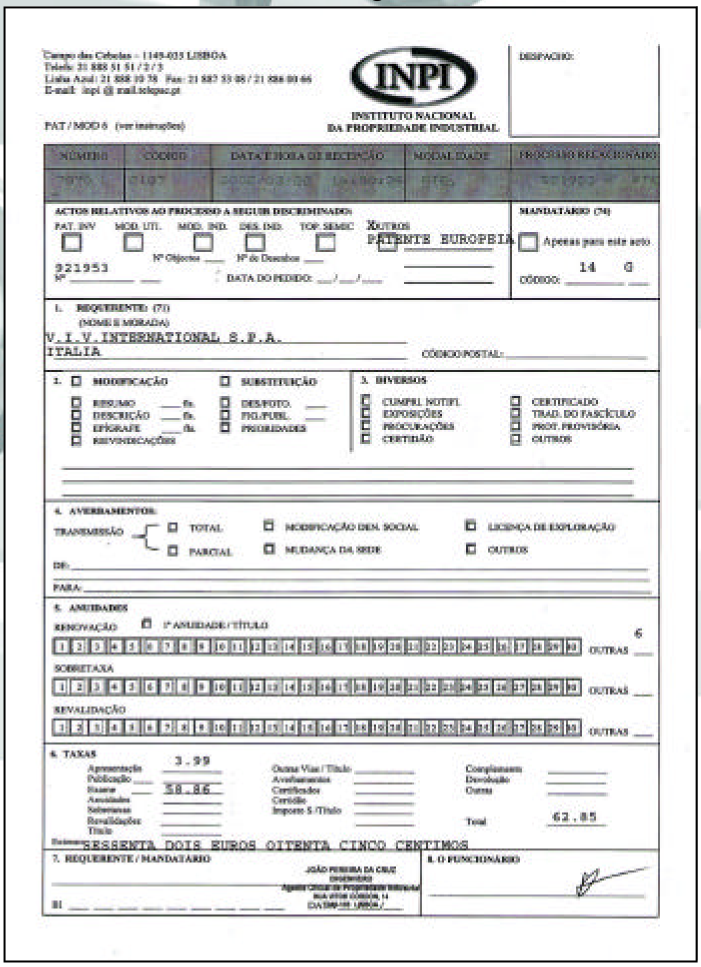
PRZEDSTAWIONY W OPISIE PATENTOWYM
WŁĄCZONYM DO NINIEJSZEGO DOKUMENTU

PATENT TRWA OD DNIA 1996.02.16

WARSZAWA, DNIA 12 KWI. 2001

PREZES
z up.
dr Zenobiusz Mikołajczak
WICEPREZES

Portugal



Campo das Cebolas – 1149-035 LISBOA
Telefs: 21 888 51 51 / 2 / 3
Linha Azul: 21 888 10 78 Fax: 21 887 53 08 / 21 886 00 66
E-mail: inpi @ mail.telepac.pt

PAT / MOD 6 (ver instruções)

INPI
INSTITUTO NACIONAL
DA PROPRIEDADE INDUSTRIAL

DESPACHO:

NÚMERO	CÓDIGO	DATA E HORA DE RECEPÇÃO	MODALIDADE	PROCESSO RELACIONADO
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ACTOS RELATIVOS AO PROCESSO A SEGUIR DISCRIMINADOS:
PAT. INV ☐ MOD. UTI. ☐ MOD. IND. ☐ DES. IND. ☐ TOP. SEMIC ☐ X OUTROS
PATENTE EUROPEIA
Nº Objectos ___ Nº de Desenhos ___
921953
Nº ___ DATA DO PEDIDO: ___/___/___

MANDATÁRIO (74)
☐ Apenas para este acto
CÓDIGO: 14 G

1. REQUERENTE (71)
(NOME E MORADA)
V.I.V.INTERNATIONAL S.P.A.
ITALIA
CÓDIGO POSTAL:

2. ☐ MODIFICAÇÃO ☐ SUBSTITUIÇÃO
☐ RESUMO ___ fls. ☐ DES/FOTO. ___
☐ DESCRIÇÃO ___ fls. ☐ FIG./PUBL. ___
☐ EPÍGRAFE ___ fls. ☐ PRIORIDADES
☐ REIVINDICAÇÕES

3. DIVERSOS
☐ CUMPRI. NOTIFI. ☐ CERTIFICADO
☐ EXPOSIÇÕES ☐ TRAD. DO FASCÍCULO
☐ PROCURAÇÕES ☐ PROT. PROVISÓRIA
☐ CERTIDÃO ☐ OUTROS

4. AVERBAMENTOS:
TRANSMISSÃO ☐ TOTAL ☐ PARCIAL
☐ MODIFICAÇÃO DEN. SOCIAL ☐ MUDANÇA DA SEDE
☐ LICENÇA DE EXPLORAÇÃO ☐ OUTROS
DE:
PARA:

5. ANUIDADES
RENOVAÇÃO ☐ 1ª ANUIDADE / TÍTULO
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 OUTRAS 6
SOBRETAXA
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REVALIDAÇÃO
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 OUTRAS

6. TAXAS
Apresentação 3.99
Publicação
Exame 58.86
Anuidades
Sobretaxas
Revalidações
Título
Outras Vias / Título
Averbamentos
Certificados
Certidão
Imposto S./Título
Complemento
Devolução
Outras
Total 62.85
Extenso: SESSENTA DOIS EUROS OITENTA CINCO CENTIMOS

7. REQUERENTE / MANDATÁRIO
JOÃO PEREIRA DA CRUZ
ENGENHEIRO
Agente Oficial da Propriedade Industrial
RUA VITOR CORDON, 14
1249-103 LISBOA
BI
DATA ___/___/___

8. O FUNCIONÁRIO

(19) **REPUBLIKA SLOVENIJA**
Urad RS za intelektualno lastnino

(11) **SI/EP 0817728 T1**

(12) **PREVOD ZAHTEVKOV**
RAZŠIRJENEGA EVROPSKEGA PATENTA

(21) Številka prevoda: 9630055
(22) Datum prijave: 15.02.1996

(51) MPK[6]: B44C 1/17, B41M 3/12, B41M 5/035

(45) Datum objave prevoda patentnih zahtevkov: 31.08.1999

(96) Evropska patentna prijava: 15.02.1996 EP 96904794.3

(30) Prednostna pravica: 22.03.1995 IT MI950570

(87) Objava mednarodne patentne prijave: WO 96/29208, 26.09.1996 (43/1996), En

(86) Mednarodna patentna prijava: 15.02.1996 WO PCT/EP96/00656

(87) Objava evropskega patenta: EP 0817728 B1, 21.04.1999 (16/1999), En

(72) Izumitelj: FENZI Giancarlo, I-37030 Cazzano di Tramigna, IT

(73) Nosilec: V.I.V. International S.p.A., Via Costeggiola, 37030 Cazzano Di Tramigna VR, IT

(74) Zastopnik: Patentna pisarna d.o.o., Čopova 14 p.p. 322, 1000 Ljubljana, SI

(54) **POSTOPEK IZDELAVE DEKORIRANIH, EKSTRUDIRANIH, PROFILIRANIH ELEMENTOV**

SI/EP 0817728 T1

02-04-02

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA GOSPODARSTVO

URAD REPUBLIKE SLOVENIJE
ZA INTELEKTUALNO LASTNINO
1000 LJUBLJANA, KOTNIKOVA 6

Razširitev evropskega patenta na Slovenijo

Vloga prejeta (izpolni Urad): 2.4.2002

Številka vloge (izpolni Urad): P-9930040

1. Naslov za dopisovanje:

INVENTIO d.o.o.
p.p. 2410
1001 LJUBLJANA

Tel.: 421 13 60
Faks: 421 13 61
Šifra: P2020304

2. Nosilec pravice (priimek in ime ter naslov oz. firma in sedež):

V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR
ITALIJA

3. Zastopnik: INVENTIO d.o.o., LJUBLJANA
Registrska številka: 156

4. Naziv izuma v slovenščini:

Postopek izdelave različno obarvanih in/ali dekoriranih umetniških predmetov s pomočjo tehnike prenosa barve s sublimacijo

5. Številka EP prijave: 99 107 088.9
Datum EP prijave: 12. 04. 1999

6. Številka EP objave: 0 950 540

7. Datum objave sklepa o podelitvi EP patenta: 27. 03. 2002

8. Priloge:
- ☒ prevod patentnih zahtevkov v slovenščino; število izvodov: 1
- ☐ pooblastilo zastopniku
- ☒ potrdilo o plačilu pristojbine:
  - ☒ za objavo
  - ☐ za tiskanje patentnih zahtevkov
  - ☒ za vzdrževanje veljavnosti za 4 leto
- ☐ ____________

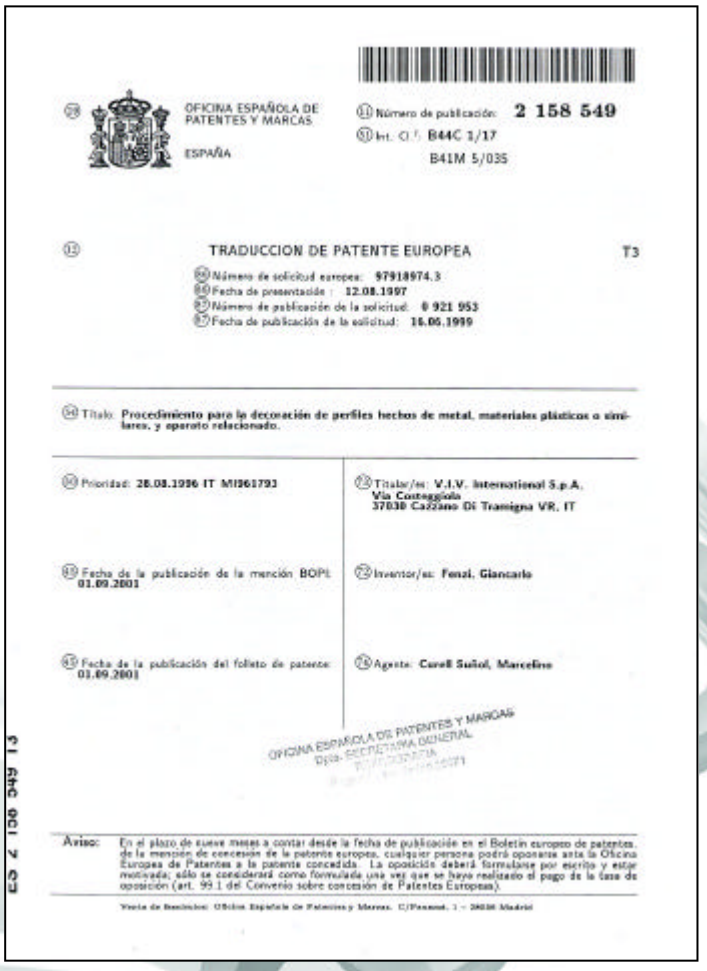
9. ☐ Poslano po telefaksu

PREJETO
04-04-2002
2050

Inventio
INVENTIO d.o.o.
Priimek, ime in podpis nosilca pravice (zastopnika)

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA GOSPODARSTVO
URAD RS ZA INTELEKTUALNO LASTNINO
Prejeto dne: 02-04-2002
5302

Obrazec EPO EPC-1/1



(19) OFICINA ESPAÑOLA DE PATENTES Y MARCAS
ESPAÑA

(11) Número de publicación: **2 158 549**
(51) Int. Cl.: B44C 1/17
B41M 5/035

(12) TRADUCCION DE PATENTE EUROPEA T3

(96) Número de solicitud europea: 97918974.3
(96) Fecha de presentación: 12.08.1997
(97) Número de publicación de la solicitud: 0 921 953
(97) Fecha de publicación de la solicitud: 16.06.1999

(54) Título: **Procedimiento para la decoración de perfiles hechos de metal, materiales plásticos o similares, y aparato relacionado.**

(30) Prioridad: 28.08.1996 IT MI961793

(73) Titular/es: V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR, IT

(45) Fecha de la publicación de la mención BOPI:
01.09.2001

(72) Inventor/es: Fenzi, Giancarlo

(45) Fecha de la publicación del folleto de patente:
01.09.2001

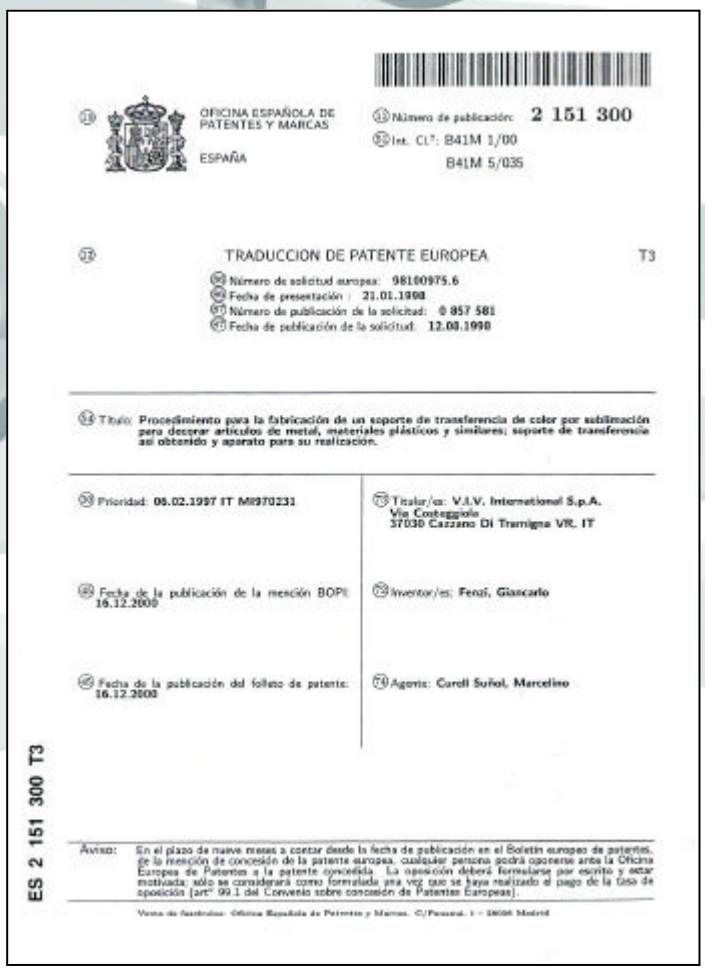
(74) Agente: Curell Suñol, Marcelino

OFICINA ESPAÑOLA DE PATENTES Y MARCAS
Dpto. SECRETARIA GENERAL
ENTRADA

Aviso: En el plazo de nueve meses a contar desde la fecha de publicación en el Boletín europeo de patentes, de la mención de concesión de la patente europea, cualquier persona podrá oponerse ante la Oficina Europea de Patentes a la patente concedida. La oposición deberá formularse por escrito y estar motivada; sólo se considerará como formulada una vez que se haya realizado el pago de la tasa de oposición (art. 99.1 del Convenio sobre concesión de Patentes Europeas).

Venta de fascículos: Oficina Española de Patentes y Marcas. C/Panamá, 1 – 28036 Madrid

ES 2 158 549 T3



(19) OFICINA ESPAÑOLA DE PATENTES Y MARCAS
ESPAÑA

(11) Número de publicación: **2 151 300**
(51) Int. Cl.: B41M 1/00
B41M 5/035

(12) TRADUCCION DE PATENTE EUROPEA T3

(96) Número de solicitud europea: 98100975.6
(96) Fecha de presentación: 21.01.1998
(97) Número de publicación de la solicitud: 0 857 581
(97) Fecha de publicación de la solicitud: 12.08.1998

(54) Título: **Procedimiento para la fabricación de un soporte de transferencia de color por sublimación para decorar artículos de metal, materiales plásticos y similares; soporte de transferencia así obtenido y aparato para su realización.**

(30) Prioridad: 06.02.1997 IT MI970231

(73) Titular/es: V.I.V. International S.p.A.
Via Costeggiola
37030 Cazzano Di Tramigna VR, IT

(45) Fecha de la publicación de la mención BOPI:
16.12.2000

(72) Inventor/es: Fenzi, Giancarlo

(45) Fecha de la publicación del folleto de patente:
16.12.2000

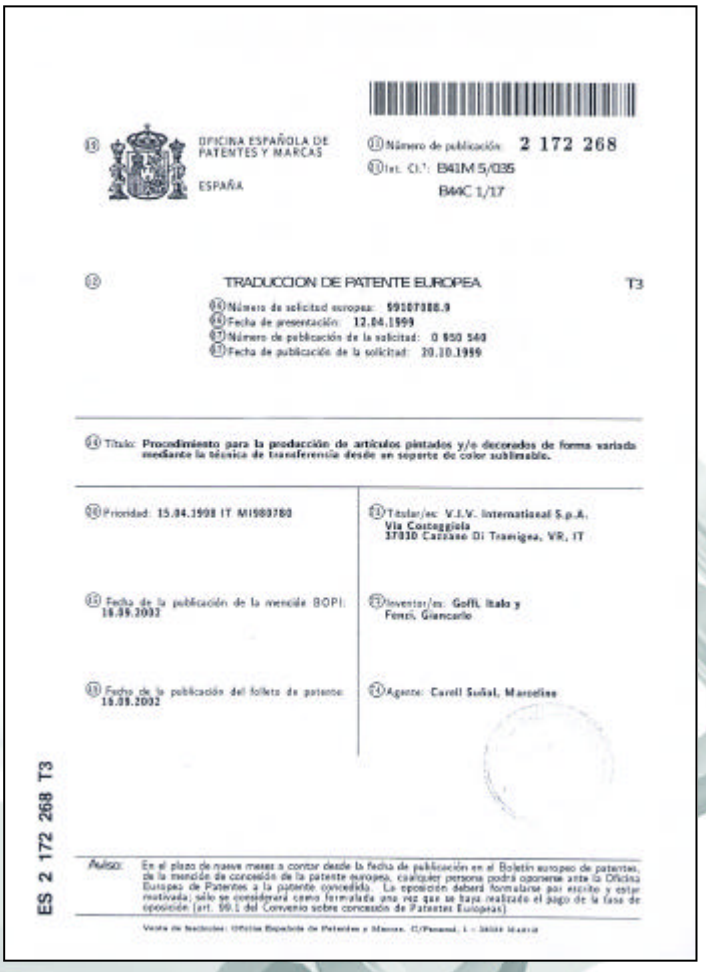
(74) Agente: Curell Suñol, Marcelino

Aviso: En el plazo de nueve meses a contar desde la fecha de publicación en el Boletín europeo de patentes, de la mención de concesión de la patente europea, cualquier persona podrá oponerse ante la Oficina Europea de Patentes a la patente concedida. La oposición deberá formularse por escrito y estar motivada; sólo se considerará como formulada una vez que se haya realizado el pago de la tasa de oposición (art° 99.1 del Convenio sobre concesión de Patentes Europeas).

Venta de fascículos: Oficina Española de Patentes y Marcas. C/Panamá, 1 – 28036 Madrid

ES 2 151 300 T3

Spain



(19) OFICINA ESPAÑOLA DE PATENTES Y MARCAS
ESPAÑA

(11) Número de publicación: **2 172 268**
(51) Int. Cl.⁷: B41M 5/035
B44C 1/17

(12) TRADUCCION DE PATENTE EUROPEA T3

(86) Número de solicitud europea: 99107888.9
(86) Fecha de presentación: 12.04.1999
(87) Número de publicación de la solicitud: 0 950 540
(87) Fecha de publicación de la solicitud: 20.10.1999

(54) Título: **Procedimiento para la producción de artículos pintados y/o decorados de forma variada mediante la técnica de transferencia desde un soporte de color sublimable.**

(30) Prioridad: 15.04.1998 IT MI980780

(73) Titular/es: V.I.V. International S.p.A.
Via Costeggiola
37010 Cazzano Di Tramigna, VR, IT

(45) Fecha de la publicación de la mención BOPI:
16.09.2002

(72) Inventor/es: Goffi, Italo y
Fenzi, Giancarlo

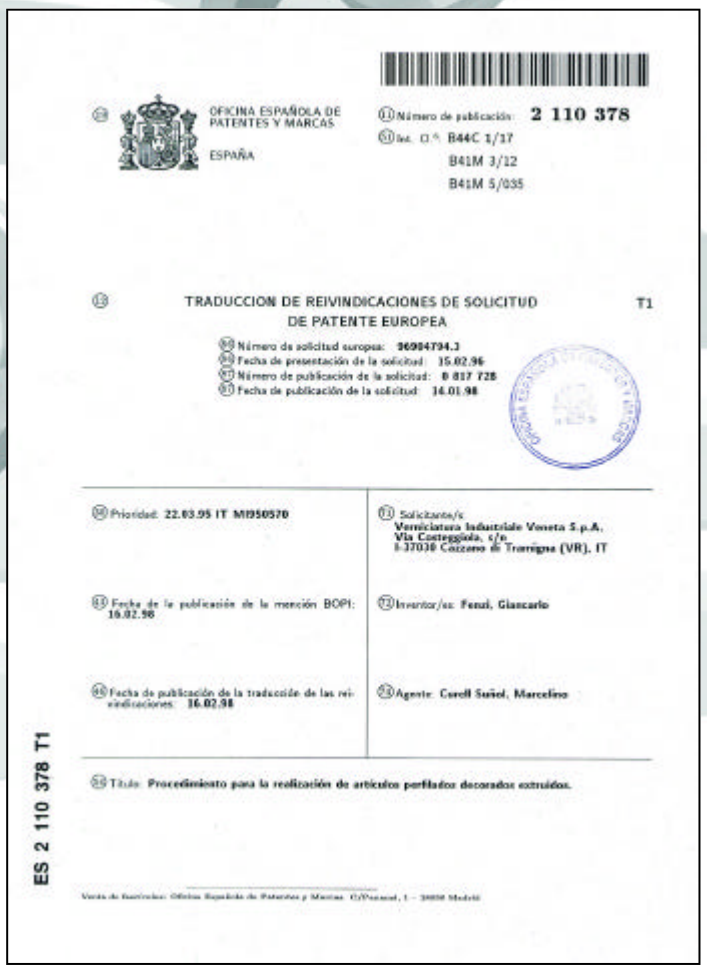
(45) Fecha de la publicación del folleto de patente:
16.09.2002

(74) Agente: Curell Suñol, Marcelino

ES 2 172 268 T3

Aviso: En el plazo de nueve meses a contar desde la fecha de publicación en el Boletín europeo de patentes, de la mención de concesión de la patente europea, cualquier persona podrá oponerse ante la Oficina Europea de Patentes a la patente concedida. La oposición deberá formalizarse por escrito y estar motivada; sólo se considerará como formulada una vez que se haya realizado el pago de la tasa de oposición (art. 99.1 del Convenio sobre concesión de Patentes Europeas)

Venta de fascículos: Oficina Española de Patentes y Marcas. C/Panamá, 1 - 28071 Madrid



(19) OFICINA ESPAÑOLA DE PATENTES Y MARCAS
ESPAÑA

(11) Número de publicación: **2 110 378**
(51) Int. Cl.⁶: B44C 1/17
B41M 3/12
B41M 5/035

(12) TRADUCCION DE REIVINDICACIONES DE SOLICITUD DE PATENTE EUROPEA T1

(86) Número de solicitud europea: 96904794.3
(86) Fecha de presentación de la solicitud: 15.02.96
(87) Número de publicación de la solicitud: 0 817 728
(87) Fecha de publicación de la solicitud: 14.01.98

(30) Prioridad: 22.03.95 IT MI950570

(73) Solicitante/s:
Verniciatura Industriale Veneta S.p.A.
Via Costeggiola, c/o
I-37030 Cazzano di Tramigna (VR), IT

(45) Fecha de la publicación de la mención BOPI:
16.02.98

(72) Inventor/es: Fenzi, Giancarlo

(48) Fecha de publicación de la traducción de las reivindicaciones: 16.02.98

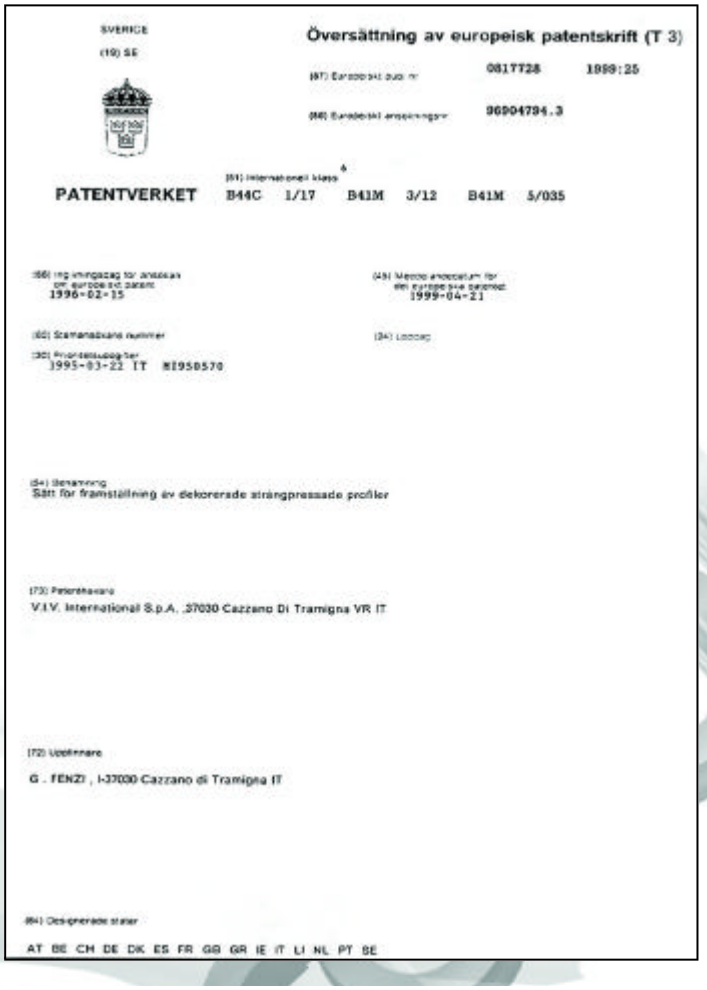
(74) Agente: Curell Suñol, Marcelino

(54) Título: **Procedimiento para la realización de artículos perfilados decorados extruidos.**

ES 2 110 378 T1

Venta de fascículos: Oficina Española de Patentes y Marcas. C/Panamá, 1 - 28071 Madrid

Sweden



SVERIGE

(19) SE

Översättning av europeisk patentskrift (T 3)

(97) Europeiskt publ nr 0817728 1999:25

(96) Europeisk ansökningsnr 96904794.3

PATENTVERKET

(51) Internationell klass 6 B44C 1/17 B41M 3/12 B41M 5/035

(86) Ingivningsdag för ansökan om europeiskt patent 1996-02-15

(45) Meddelandedatum för den europeiska patentskriften 1999-04-21

(62) Stamansökans nummer

(24) Löpdag

(30) Prioritetsuppgifter 1995-03-22 IT MI950570

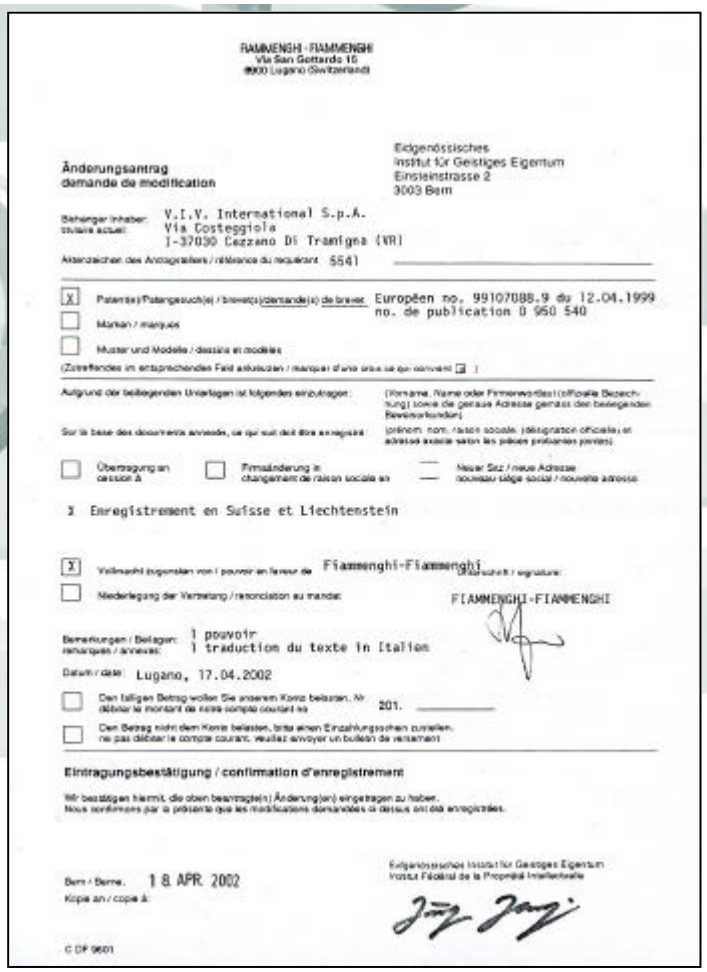
(54) Benämning
Sätt för framställning av dekorerade strängpressade profiler

(73) Patentinnehavare
V.I.V. International S.p.A. ,37030 Cazzano Di Tramigna VR IT

(72) Uppfinnare
G . FENZI , I-37030 Cazzano di Tramigna IT

(84) Designerade stater
AT BE CH DE DK ES FR GB GR IE IT LI NL PT SE

Switzerland



FIAMMENGHI - FIAMMENGHI
Via San Gottardo 15
6900 Lugano (Switzerland)

Eidgenössisches
Institut für Geistiges Eigentum
Einsteinstrasse 2
3003 Bern

Änderungsantrag
demande de modification

Bisheriger Inhaber: V.I.V. International S.p.A.
titulaire actuel: Via Costeggiola
I-37030 Cazzano Di Tramigna (VR)

Aktenzeichen des Anzeigestellers / référence du requérant 5541

[X] Patent(e)/Patentgesuch(e) / brevet(s)/demande(s) de brevet Européen no. 99107088.9 du 12.04.1999
no. de publication 0 950 540

[ ] Marken / marques

[ ] Muster und Modelle / dessins et modèles

(Zutreffendes in entsprechendes Feld ankreuzen / marquer d'une croix ce qui convient)

Aufgrund der beiliegenden Unterlagen ist folgendes einzutragen: (Vornamen, Name oder Firmenwortlaut (offizielle Bezeichnung) sowie die genaue Adresse gemäss den beiliegenden Beweisurkunden)

Sur la base des documents annexés, ce qui suit doit être enregistré (prénom, nom, raison sociale, (désignation officielle) et adresse exacte selon les pièces probantes jointes)

[ ] Übertragung an cession à [ ] Firmaänderung in changement de raison sociale en — Neuer Sitz / neue Adresse nouveau siège social / nouvelle adresse

1 Enregistrement en Suisse et Liechtenstein

[X] Vollmacht zugunsten von / pouvoir en faveur de Fiammenghi-Fiammenghi Unterschrift / signature:

[ ] Niederlegung der Vertretung / renonciation au mandat FIAMMENGHI-FIAMMENGHI

Bemerkungen / Beilagen: 1 pouvoir
remarques / annexes: 1 traduction du texte in Italien

Datum / date Lugano, 17.04.2002

[ ] Den fälligen Betrag wollen Sie unserem Konto belasten. Nr. débiter le montant de notre compte courant no 201.

[ ] Den Betrag nicht dem Konto belasten, bitte einen Einzahlungsschein zustellen. ne pas débiter le compte courant, veuillez envoyer un bulletin de versement

Eintragungsbestätigung / confirmation d'enregistrement

Wir bestätigen hiermit, die oben beantragte(n) Änderung(en) eingetragen zu haben.
Nous confirmons par la présente que les modifications demandées ci-dessus ont été enregistrées.

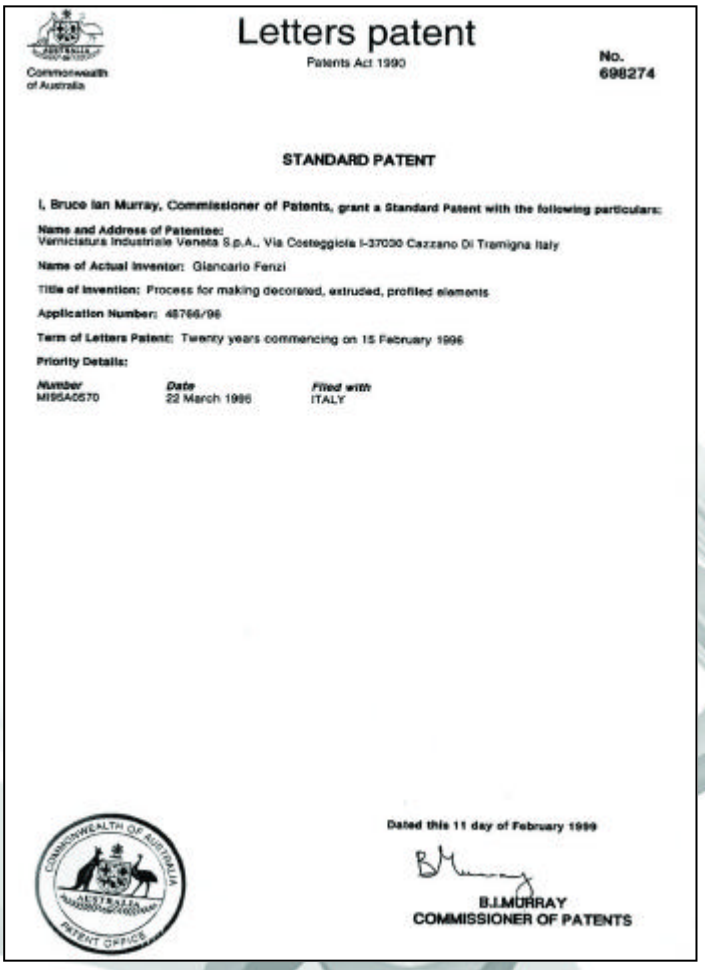
Bern / Berne, 18. APR. 2002

Eidgenössisches Institut für Geistiges Eigentum
Institut Fédéral de la Propriété Intellectuelle

Kopie an / copie à:

CDP 9601

Australia



Commonwealth of Australia

Letters patent

Patents Act 1990

No. 698274

STANDARD PATENT

I, Bruce Ian Murray, Commissioner of Patents, grant a Standard Patent with the following particulars:

Name and Address of Patentee:
Verniciatura Industriale Veneta S.p.A., Via Costeggiola I-37030 Cazzano Di Tramigna Italy

Name of Actual Inventor: Giancarlo Fenzi

Title of Invention: Process for making decorated, extruded, profiled elements

Application Number: 48766/96

Term of Letters Patent: Twenty years commencing on 15 February 1996

Priority Details:

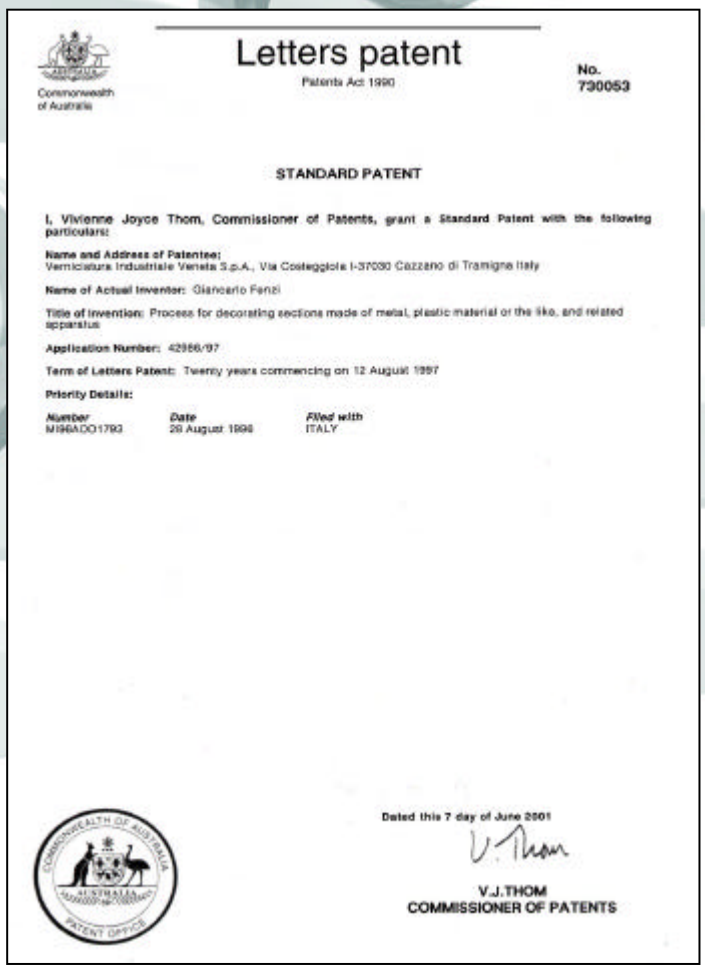
Number	*Date*	*Filed with*
MI95A0570	22 March 1995	ITALY

COMMONWEALTH OF AUSTRALIA AUSTRALIA PATENT OFFICE

Dated this 11 day of February 1999

B.J.MURRAY
COMMISSIONER OF PATENTS

Australia



Commonwealth of Australia

Letters patent

Patents Act 1990

No. 730053

STANDARD PATENT

I, Vivienne Joyce Thom, Commissioner of Patents, grant a Standard Patent with the following particulars:

Name and Address of Patentee:
Verniciatura Industriale Veneta S.p.A., Via Costeggiola I-37030 Cazzano di Tramigna Italy

Name of Actual Inventor: Giancarlo Fenzi

Title of Invention: Process for decorating sections made of metal, plastic material or the like, and related apparatus

Application Number: 42986/97

Term of Letters Patent: Twenty years commencing on 12 August 1997

Priority Details:

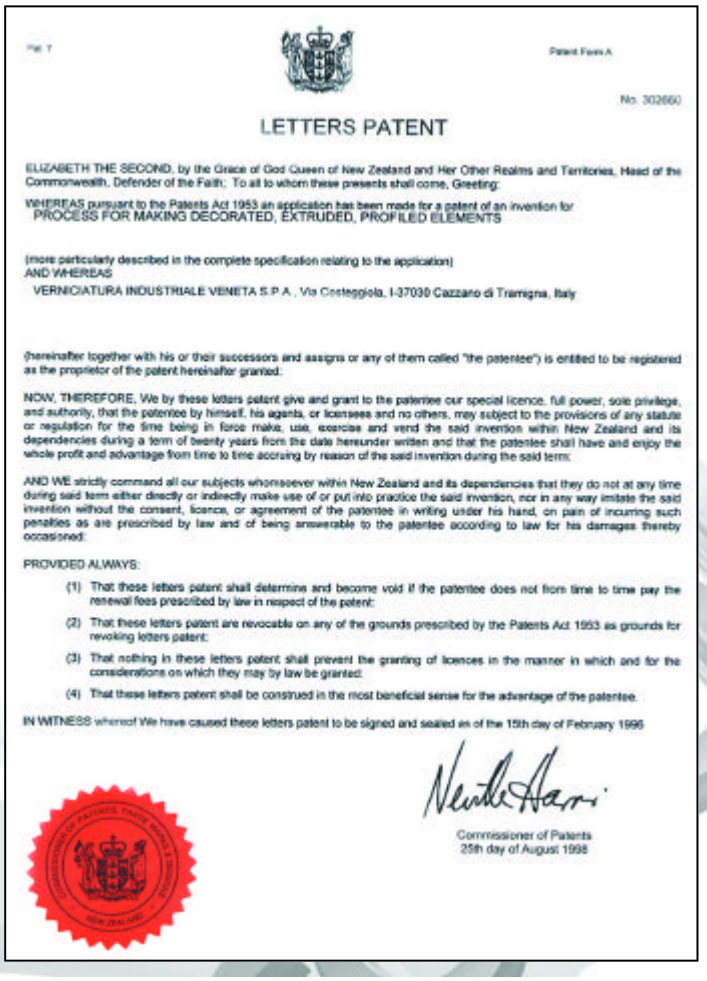
Number	*Date*	*Filed with*
MI96A001793	29 August 1996	ITALY

COMMONWEALTH OF AUSTRALIA AUSTRALIA PATENT OFFICE

Dated this 7 day of June 2001

V.J.THOM
COMMISSIONER OF PATENTS

New Zeeland



No. 302660

LETTERS PATENT

ELIZABETH THE SECOND, by the Grace of God Queen of New Zealand and Her Other Realms and Territories, Head of the Commonwealth, Defender of the Faith; To all to whom these presents shall come, Greeting:

WHEREAS pursuant to the Patents Act 1953 an application has been made for a patent of an invention for
PROCESS FOR MAKING DECORATED, EXTRUDED, PROFILED ELEMENTS

(more particularly described in the complete specification relating to the application)
AND WHEREAS
VERNICIATURA INDUSTRIALE VENETA S.P.A., Via Costeggiola, I-37030 Cazzano di Tramigna, Italy

(hereinafter together with his or their successors and assigns or any of them called "the patentee") is entitled to be registered as the proprietor of the patent hereinafter granted:

NOW, THEREFORE, We by these letters patent give and grant to the patentee our special licence, full power, sole privilege, and authority, that the patentee by himself, his agents, or licensees and no others, may subject to the provisions of any statute or regulation for the time being in force make, use, exercise and vend the said invention within New Zealand and its dependencies during a term of twenty years from the date hereunder written and that the patentee shall have and enjoy the whole profit and advantage from time to time accruing by reason of the said invention during the said term:

AND WE strictly command all our subjects whomsoever within New Zealand and its dependencies that they do not at any time during said term either directly or indirectly make use of or put into practice the said invention, nor in any way imitate the said invention without the consent, licence, or agreement of the patentee in writing under his hand, on pain of incurring such penalties as are prescribed by law and of being answerable to the patentee according to law for his damages thereby occasioned:

PROVIDED ALWAYS:

(1) That these letters patent shall determine and become void if the patentee does not from time to time pay the renewal fees prescribed by law in respect of the patent:

(2) That these letters patent are revocable on any of the grounds prescribed by the Patents Act 1953 as grounds for revoking letters patent:

(3) That nothing in these letters patent shall prevent the granting of licences in the manner in which and for the considerations on which they may by law be granted:

(4) That these letters patent shall be construed in the most beneficial sense for the advantage of the patentee.

IN WITNESS whereof We have caused these letters patent to be signed and sealed on the 15th day of February 1996

Commissioner of Patents
25th day of August 1998

Russia

РОССИЙСКАЯ ФЕДЕРАЦИЯ

РОССИЙСКОЕ АГЕНТСТВО ПО ПАТЕНТАМ И ТОВАРНЫМ ЗНАКАМ

ПАТЕНТ

НА ИЗОБРЕТЕНИЕ

№ 2135370

На основании Патентного закона Российской Федерации, введенного в действие 14 октября 1992 года, Российским агентством по патентам и товарным знакам выдан настоящий патент на изобретение

СПОСОБ И УСТРОЙСТВО ДЛЯ ИЗГОТОВЛЕНИЯ ДЕКОРИРОВАННЫХ ЭКСТРУДИРОВАННЫХ ПРОФИЛИРОВАННЫХ ЭЛЕМЕНТОВ

Патентообладатель(ли):
Вернициатура Индустриале Венета С.п.А. (IT)

по заявке № 97117452, дата поступления: 15.02.96

Приоритет от 22.03.95

Автор(ы) изобретения:
Джанкарло Фонди (IT)

Патент действует на всей территории Российской Федерации в течение 20 лет с **15 февраля 1996 г.** при условии своевременной уплаты пошлины за поддержание патента в силе

Зарегистрирован в Государственном реестре изобретений Российской Федерации

г. Москва, ***27 августа 1999 г.***

Генеральный директор
Б.П. Кирпичников

Patents

Bahrain

State of Bahrain
Ministry of Commerce
Directorate of Agencies &
Industrial Property
INDUSTRIAL PROPERTY OFFICE

دولة البحرين
وزارة التجـــارة
إدارة الوكالات والملكية الصناعية
مكتب الملكية الصناعية

شـهادة تسـجيـل
Registration Certificate

بخصوص الامتياز الصناعي رقم ب أ ص / ١٢٩٧.

يشهد مكتب الملكية الصناعية بإدارة الوكالات والملكية الصناعية بمقتضى لائحـــة الامتيازات الصناعية والتصميمات والعلامات التجارية لســنة ١٩٥٥م، والمعدلــة بالمرسوم بقانون رقم (٢٢) لسنة ١٩٧٧م، أنه بتاريخ ٣٠ مارس ١٩٩٩م، جـــرى تسجيل/ فيريلسيا تورا أند ستريلي فينيتــا أس . بــي . أيــه، وعنوانــهم / فيا كوستيجولا، ٣٧٠٣٠ – أبي كازاتو دي ترامينجا، فــي أر – إيطاليــا، أصحــاب مصانع وتجار.

مالكا للامتياز الصناعي من نوع/ طريقة عمل قطاعات منبثقة منقوشة ومزينة.

إن طلب تسجيل الامتياز الصناعي المذكور قد تم نشره في الجريدة الرسمية رقـــم ٢٤٠٢ المؤرخة في ٨ ديسمبر ١٩٩٩م ، وان التسجيل في دولة البحرين ســيبقى ساري المفعول لمدة خمسة عشر سنة تبدأ من تاريخ تقديم الطلب المشار إلية أعلاه كما يجوز مد فترة التسجيل خمس سنوات اخرى.

حررت في السادس والعشرين من شهر مـــــارس سنة ٢٠٠٠م

رئيس الملكية الصناعية

Egypt

جمهورية مصر العربية
أكاديمية البحث العلمي والتكنولوجيا
مكتب براءات الاختراع

براءة اختراع أصلية
رقم ٢٠٦٣٦

رئيس أكاديمية البحث العلمي والتكنولوجيا

بعد الاطـــلاع على المادة ٢٤ من القانون رقم ١٣٢ لسنة ١٩٤٩ الخاص ببراءات الاختراع والرسوم والنماذج الصناعية .

وعلى قرار رئيس الجمهورية رقم ٣٧٧ لسنة ١٩٩٨ بتولى أكاديمية البحث العلمي والتكنولوجيا الاختصاصات المنصوص عليها في القانون المشار إليه فيما يتعلق ببراءات الاختراع .

وعلى طلب البراءة رقم ٨٥٠ في ٢١ من شهر سبتمبر سنة ٩٦ ١٩ والمستندات الملحقة به .

قــرر

مادة ١ ـــ تمنح براءة اختراع أصلية ٢٠٦٣٦

إلى : فيرتيسيالتيرا انتستريال فينيتا اس بى ايه
مركزها العام: فياكو ستيجولا ٣٧٠٣٠، ٣٧٠٣٠ كازاتيو، ترامينجاى أر ـ ايطاليا

عن اختراع بتسمية : طريقة لتصنيع أجزاء مزخرفة و منقوشة عن طريق البثق

اسم المخترع : جيانكارلو ليدى

وقد توضح بيانه في الوصف المرافق لهذا القرار ، ومدة البراءة خمسة عشر سنة
تبدأ ٢١ من شهر سبتمبر سنة ٩٦ ١٩ وتنتهي في ٢٠ من شهر سبتمبر سنة ٢٠١١
(سنة الفان واحدى عشرة)

ويتبع الطلب بحق أسبقية استناد للطلب المودع في

بتاريخ

مادة ٢ ـــ صدر هذا القرار في ٢١ من شهر اكتوبر سنة ٩٩ ١٩

وعلى جهة الاختصاص نشره في جريدة براءات الاختراع ،

رئيس
مكتب براءات الاختراع

الشبكة القومية للمعلومات العلمية

رئيس
أكاديمية البحث العلمي والتكنولوجيا

The United States of America

The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

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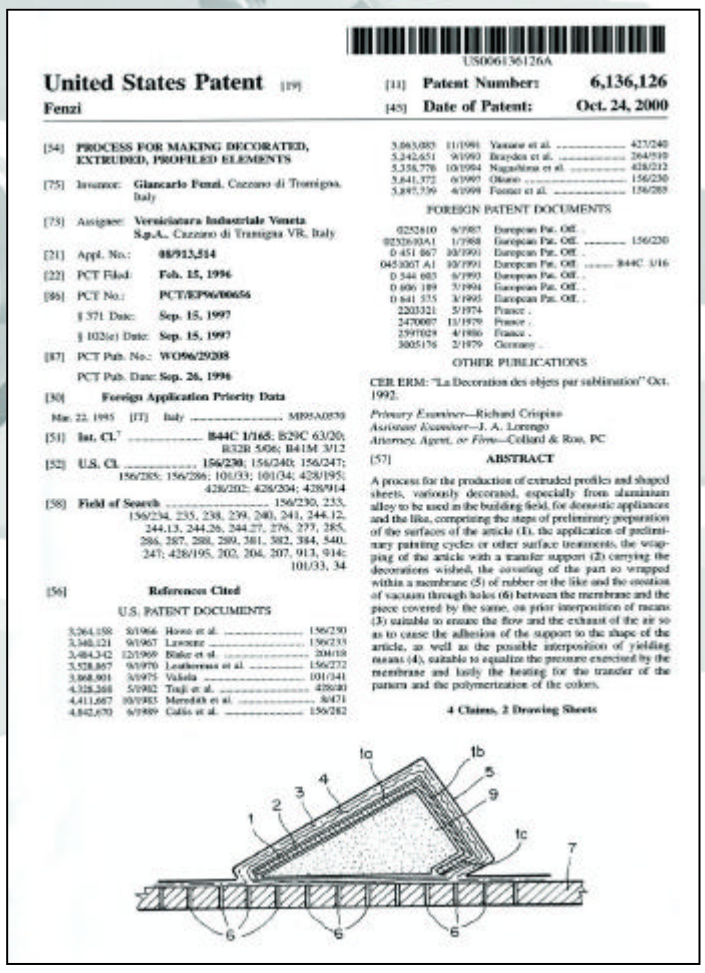

US006136126A

United States Patent [19]

Fenzi

[11] **Patent Number: 6,136,126**

[45] **Date of Patent: Oct. 24, 2000**

[54] **PROCESS FOR MAKING DECORATED, EXTRUDED, PROFILED ELEMENTS**

[75] Inventor: **Giancarlo Fenzi**, Cazzano di Tramigna, Italy

[73] Assignee: **Verniciatura Industriale Veneta S.p.A.**, Cazzano di Tramigna VR, Italy

[21] Appl. No.: **08/913,514**

[22] PCT Filed: **Feb. 15, 1996**

[86] PCT No.: **PCT/EP96/00656**

§ 371 Date: **Sep. 15, 1997**

§ 102(e) Date: **Sep. 15, 1997**

[87] PCT Pub. No.: **WO96/29208**

PCT Pub. Date: **Sep. 26, 1996**

[30] **Foreign Application Priority Data**

Mar. 22, 1995 [IT] Italy MI95A0570

[51] **Int. Cl.**[7] **B44C 1/165**; B29C 63/20; B32B 5/06; B41M 3/12

[52] **U.S. Cl.** **156/230**; 156/240; 156/247; 156/285; 156/286; 101/33; 101/34; 428/195; 428/202; 428/204; 428/914

[58] **Field of Search** 156/230, 233, 156/234, 235, 238, 239, 240, 241, 244.12, 244.13, 244.26, 244.27, 276, 277, 285, 286, 287, 288, 289, 381, 382, 384, 540, 247; 428/195, 202, 204, 207, 913, 914; 101/33, 34

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Primary Examiner—Richard Crispino
Assistant Examiner—J. A. Lorengo
Attorney, Agent, or Firm—Collard & Roe, PC

[57] **ABSTRACT**

A process for the production of extruded profiles and shaped sheets, variously decorated, especially from aluminium alloy to be used in the building field, for domestic appliances and the like, comprising the steps of preliminary preparation of the surfaces of the article (1), the application of preliminary painting cycles or other surface treatments, the wrapping of the article with a transfer support (2) carrying the decorations wished, the covering of the part so wrapped within a membrane (5) of rubber or the like and the creation of vacuum through holes (6) between the membrane and the piece covered by the same, on prior interposition of means (3) suitable to ensure the flow and the exhaust of the air so as to cause the adhesion of the support to the shape of the article, as well as the possible interposition of yielding means (4), suitable to equalize the pressure exercised by the membrane and lastly the heating for the transfer of the pattern and the polymerization of the colors.

4 Claims, 2 Drawing Sheets

The United States of America

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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

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Director of the United States Patent and Trademark Office

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US006335749B1

(12) **United States Patent**
Carizzoni et al.

(10) **Patent No.: US 6,335,749 B1**
(45) **Date of Patent: Jan. 1, 2002**

(54) **PROCESS AND APPARATUS FOR PRINTING AND DECORATING BY MEANS OF SUBLIMABLE INKS**

(75) Inventors: **Ilario Carizzoni**, Cologno Monzese (MI); **Giovanni Ferrari**, Concesio (BS); **Francesco Spolaor**, Milan, all of (IT)

(73) Assignee: **V.L.V. International S.p.A.**, Cazzano di Travagna (IT)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/110,489**

(22) Filed: **Jul. 6, 1998**

(30) **Foreign Application Priority Data**

Jul. 4, 1997 (IT) MI97A1582

(51) **Int. Cl.**[7] **B41J 2/315**; B44C 1/165

(52) **U.S. Cl.** **347/171**; 347/193; 156/240

(58) **Field of Search** 437/183, 194, 213, 113; 428/34.9, 35.1, 35.2, 319.7; 156/229, 235, 246, 228

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WO	WO8500018	3/1985

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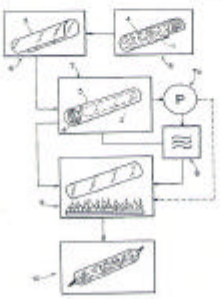
Primary Examiner—Hai C. Pham
(74) *Attorney, Agent, or Firm*—Collard & Roe, P.C.

(57) **ABSTRACT**

A process for printing and decorating an article by the use of sublimable inks, includes providing preformed images on a substrate, these preformed images are obtained using the sublimable inks; applying the substrate on surfaces of the article; applying a pressure to the preformed images for pressing the preformed images against the surfaces, providing a heat thermoretractable material and heating the heat thermoretractable material at a temperature suitable for causing a thermoretraction of the heat thermoretractable material for generating the pressure; heating the preformed images until the sublimable inks are transferred by sublimation onto the surfaces. The thermoretractable material can be polyethylene terephthalate (PET) or polyethylene naphthalate (PEN). An apparatus for printing and decorating an article by the use of sublimable inks has compression parts for applying a pressure to images provided on a substrate applied on surfaces of the articles. The images are obtained using the sublimable inks, a heater for heating the images at a temperature suitable for obtaining a transfer of these images on the surfaces by sublimation of the sublimable inks. The compression parts include a heat thermoretractable material, and the thermoretractable material which is PET or PEN.

17 Claims, 2 Drawing Sheets



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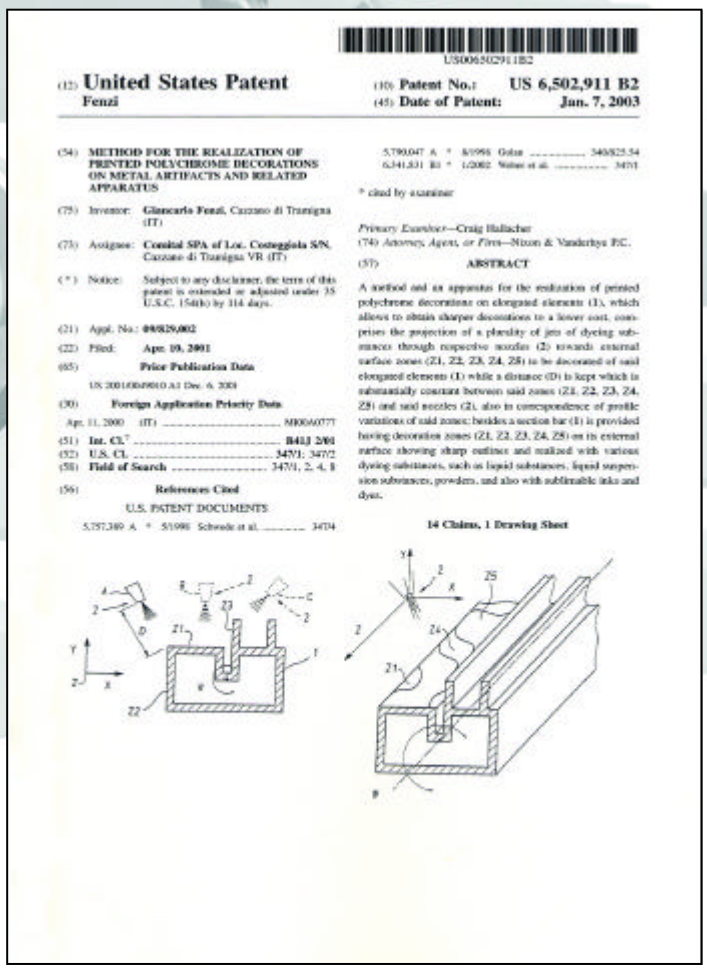

US006502911B2

(12) **United States Patent**
Fenzi

(10) **Patent No.: US 6,502,911 B2**
(45) **Date of Patent: Jan. 7, 2003**

(54) **METHOD FOR THE REALIZATION OF PRINTED POLYCHROME DECORATIONS ON METAL ARTIFACTS AND RELATED APPARATUS**

(75) Inventor: **Giancarlo Fenzi**, Cazzano di Tramigna (IT)

(73) Assignee: **Comital SPA of Loc. Coneggiola S/N**, Cazzano di Tramigna VR (IT)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 114 days.

(21) Appl. No.: **09/829,002**

(22) Filed: **Apr. 10, 2001**

(65) **Prior Publication Data**

US 2001/0045910 A1 Dec. 6, 2001

(30) **Foreign Application Priority Data**

Apr. 11, 2000 (IT) MI00A0777

(51) **Int. Cl.**[7] **B41J 2/01**

(52) **U.S. Cl.** 347/1; 347/2

(58) **Field of Search** 347/1, 2, 4, 8

(56) **References Cited**

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Primary Examiner—Craig Hallacher

(74) *Attorney, Agent, or Firm*—Nixon & Vanderhye P.C.

(57) **ABSTRACT**

A method and an apparatus for the realization of printed polychrome decorations on elongated elements (1), which allows to obtain sharper decorations to a lower cost, comprises the projection of a plurality of jets of dyeing substances through respective nozzles (2) towards external surface zones (Z1, Z2, Z3, Z4, Z5) to be decorated of said elongated elements (1) while a distance (D) is kept which is substantially constant between said zones (Z1, Z2, Z3, Z4, Z5) and said nozzles (2), also in correspondence of profile variations of said zones; besides a suction bar (3) is provided having decoration zones (Z1, Z2, Z3, Z4, Z5) on its external surface showing sharp outlines and realized with various dyeing substances, such as liquid substances, liquid suspension substances, powders, and also with sublimable inks and dyes.

14 Claims, 1 Drawing Sheet

The United States of America

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United States Patent

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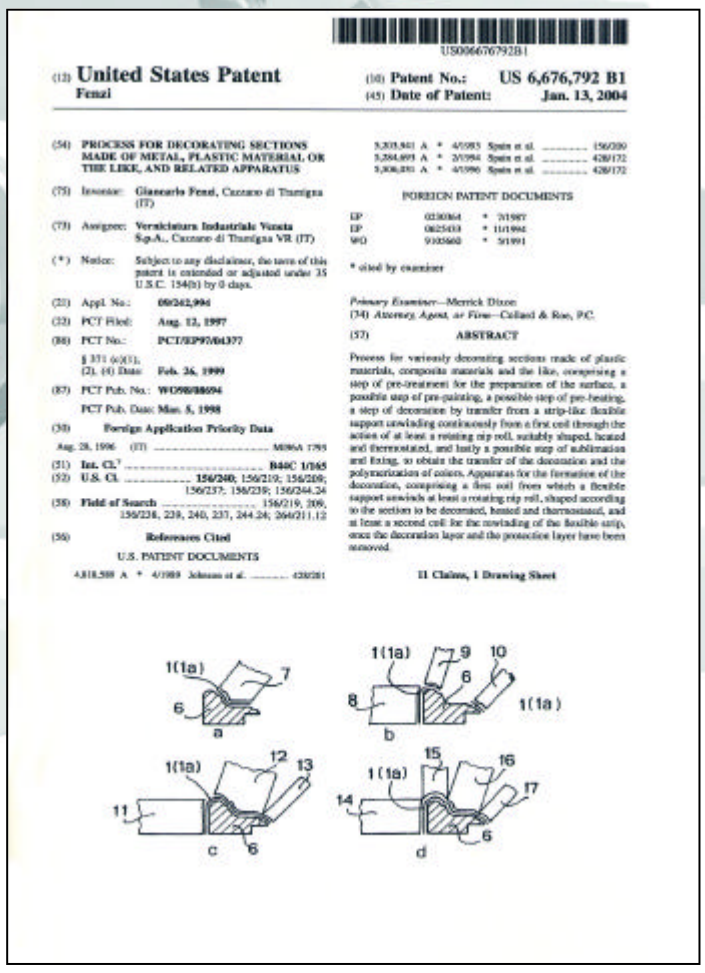

US006676792B1

(12) **United States Patent**
Fenzi

(10) **Patent No.: US 6,676,792 B1**
(45) **Date of Patent: Jan. 13, 2004**

(54) **PROCESS FOR DECORATING SECTIONS MADE OF METAL, PLASTIC MATERIAL OR THE LIKE, AND RELATED APPARATUS**

(75) Inventor: **Gianearlo Fenzi**, Cazzano di Tramigna (IT)

(73) Assignee: **Vernicitura Industriale Veneta S.p.A.**, Cazzano di Tramigna VR (IT)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/242,994**

(22) PCT Filed: **Aug. 12, 1997**

(86) PCT No.: **PCT/EP97/04377**

§ 371 (c)(1),
(2), (4) Date: **Feb. 26, 1999**

(87) PCT Pub. No.: **WO98/08694**

PCT Pub. Date: **Mar. 5, 1998**

(30) **Foreign Application Priority Data**

Aug. 28, 1996 (IT) MI96A 1785

(51) **Int. Cl.**[7] **B40C 1/165**

(52) **U.S. Cl.** **156/240**; 156/219; 156/209; 156/237; 156/239; 156/244.24

(58) **Field of Search** 156/219, 209, 156/238, 239, 240, 237, 244.24; 264/211.12

(56) **References Cited**

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FOREIGN PATENT DOCUMENTS

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* cited by examiner

Primary Examiner—Merrick Dixon
(74) *Attorney, Agent, or Firm*—Collard & Roe, P.C.

(57) **ABSTRACT**

Process for variously decorating sections made of plastic materials, composite materials and the like, comprising a step of pre-treatment for the preparation of the surface, a possible step of pre-painting, a possible step of pre-heating, a step of decoration by transfer from a strip-like flexible support unwinding continuously from a first coil through the action of at least a rotating nip roll, suitably shaped, heated and thermostated, and lastly a possible step of sublimation and fixing, to obtain the transfer of the decoration and the polymerization of colors. Apparatus for the formation of the decoration, comprising a first coil from which a flexible support unwinds at least a rotating nip roll, shaped according to the section to be decorated, heated and thermostated, and at least a second coil for the rewinding of the flexible strip, once the decoration layer and the protection layer have been removed.

11 Claims, 1 Drawing Sheet

China

发明专利证书

证书号 第138177号

发明名称：在挤压成型的型材上印刷装饰图案的方法

发明人：奥恩卡洛·劳齐

专利号：ZL 96 1 927343.3 国际专利主分类号：B44C 1/17

专利申请日：1996年2月15日

专利权人：威尼塔油漆工业公司

授权公告日：2004年1月7日

局长 王景川

Korea

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특 허 청 장

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UFFICIO ITALIANO BREVETTI E MARCHI

ATTESTATO DI REGISTRAZIONE PER MARCHIO D'IMPRESA

DI
PRIMO DEPOSITO

N. 00760309

Il presente attestato viene rilasciato per il marchio d'impresa oggetto della domanda:

num. domanda	anno	U.P.I.C.A.	data pres. domanda
007796	98	MILANO	31/07/1998

TITOLARE V.I.V. INTERNATIONAL S.P.A.
A CAZZANO DI TRAMIGNA (VERONA)

RAPPR.TE TRUPIANO ROBERTO

INDIRIZZO BREVETTI EUROPA SRL
P.ZA BERNINI 6
20100 MILANO

MARCHIO L' ESEMPLARE DEL MARCHIO PRODOTTI E SERVIZI
DA CONTRADDISTINGUERE SONO QUELLI INDICATI
NELLA UNITA DICHIARAZIONE DI PROTEZIONE

Roma, 2 OTTOBRE 1998

IL DIRIGENTE
F.to SANTE PAPARO

06 LUG. 1999

PER COPIA CONFORME DELL'ORIGINALE

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Il Direttore UPICA

La registrazione dura dieci anni a partire dalla data di deposito della domanda

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ARRANGEMENT ET PROTOCOLE
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Le Bureau international de l'Organisation Mondiale de la Propriété Intellectuelle (OMPI) certifie que les indications figurant dans le présent certificat sont conformes aux inscriptions portées au registre international tenu en vertu de l'Arrangement et du Protocole de Madrid.

Salvatore Di Palma
Directeur adjoint et Chef, Section de l'Administration
Département des enregistrements internationaux

Genève, le 12 novembre 1998

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2 octobre 1998 **700 611**

V.I.V. INTERNATIONAL S.p.A.
Via Costeggiola,
I-37030 CAZZANO DI TRAMIGNA VR
(Italie).

Nom et adresse du mandataire: TRUPIANO Roberto BREVETTI EUROPA S.R.L., 6, Piazza Bernini, I-20133 MILANO MI (Italie).

Classification des éléments figuratifs:
25.7; 26.11; 27.1; 27.5.

Description de la marque: La marque consiste en le mot DECORAL associé à un motif à lignes, partiellement ondulé, qui rappelle les lettres D et A de manière stylisée, dans toutes les dimensions, toutes les couleurs ou combinaisons de couleurs, également dans des couleurs qui contrastent.

Liste des produits et services:

2 Couleurs, vernis, laques; métaux en feuilles et en poudre pour décorateurs; pigments colorants; préservatifs contre la rouille et contre la corrosion.

6 Métaux communs et leurs alliages; métaux bruts et mi-ouvrés ainsi que leurs alliages; matériaux métalliques à bâtir; serrureries; profilés en aluminium et alliages légers; matériaux à bâtir laminés et fondus.

37 Construction d'installations de vernissage; construction d'installations d'oxydation anodique.

Enregistrement de base: Italie, 02.10.1998, 760309.

Données relatives à la priorité selon la Convention de Paris: Italie, 31.07.1998, MI98C 0007796.

Désignations selon l'Arrangement de Madrid: Algérie, Allemagne, Autriche, Benelux, Bulgarie, Chine, Croatie, Égypte, Espagne, Ex-République yougoslave de Macédoine, Fédération de Russie, France, Hongrie, Maroc, Pologne, Portugal, République tchèque, Roumanie, Saint-Marin, Slovaquie, Slovénie, Suisse, Viet Nam.

Date de notification: 12.11.1998

Langue de la demande internationale: Français

T. C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Markanın Numarası : 200534
Çeşidi : TİCARET

Decoral

Marka Sahibi: V.I.V.INTERNATIONAL S.P.A.
Tabiyeti : İTALYA
Adresi : Via costeggiola 37030 Cazzano Di Tramigna VR
İTALYA
Emtiası : 02,06,
Boyalar, vernikler, laklar; boyacılar ve ressamlar için levha ve toz halinde metaller; renklendirme pigmentleri; paslanmaya karşı ve aşınmaya karşı koruyucular. Adi metaller ve bunların alaşımları; ham ve yarı mamül metaller ve bunların alaşımları; pencere ve kapı kilitleme düzenleri; alüminyum ve hafif alaşımdan profiller; pencere çerçevelerinin, kapı çerçevelerinin, panjurların, partisyon duvarlarının imaline mahsus metal profiller ve haddeden geçirilmiş metal levhalar.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükmünde Kararnameye göre 27/08/1998 Tarihinden İtibaren ON YIL müddetle tescil edilmiştir.

Yunus LENGERANLI
ENSTİTÜ BAŞKANI

TÜRK PATENT ENSTİTÜSÜ

T. C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Markanın Numarası : 201470
Çeşidi : HİZMET

Decoral

Marka Sahibi: V.I.V.INTERNATIONAL S.P.A.
Tabiyeti : İTALYA
Adresi : Via costeggiola 37030 Cazzano Di Tramigna VR
İTALYA
Emtiası : 37,
Boyama ünitelerinin ve boyama tesislerinin inşası ve tesis edilmesi hizmetleri, oksitleme tesislerinin inşası hizmetleri.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükmünde Kararnameye göre 27/08/1998 Tarihinden İtibaren ON YIL müddetle tescil edilmiştir.

Yunus LENGERANLI
ENSTİTÜ BAŞKANI

TÜRK PATENT ENSTİTÜSÜ

SUOMI
FINLAND

TAVARAMERKIN REKISTERÖINTIPÄÄTÖS

Patentti- ja rekisterihallitus

on ottanut tavaramerkkilain 20 §:n nojalla oheisen rekisteriotteen, rekisterinumero 214311 , mukaisen tavaramerkin rekisteriin. Rekisteröinti on voimassa kymmenen vuotta rekisteröintipäivästä. Rekisteröinti voidaan uudistaa tavaramerkkilain 22 §:ssä mainittuna aikana.

Väite rekisteröintiä vastaan voidaan tehdä tavaramerkkilain 20 §:n nojalla kahden kuukauden kuluessa kuuluttamispäivästä. Rekisteröinti voidaan kumota väitteen johdosta.

Väiteaika päättyy: 31.07.1999

Helsinki 31.05.1999
Helsingfors

Kirsti Tammivuori
Jaostopäällikkö
Sektionschef

BESLUT OM VARUMÄRKESREGISTRERING

Patent- och registerstyrelsen

har med stöd av 20 § varumärkeslagen intagit varumärket, registernummer 214311 , enligt bifogade registerutdrag i registret. Registreringen gäller tio år från registreringsdagen. Registreringen kan förnyas under tid som anges i 22 § varumärkeslagen.

En invändning mot registreringen kan framställas med stöd av 20 § varumärkeslagen inom två månader från kungörelsedagen. Registreringen kan upphävas med anledning av invändningen.

Frist för invändningen: 31.07.1999

Kolster Oy Ab
Iso Roobertinkatu 23
00120 HELSINKI

Commonwealth of Australia

Certificate of registration of trade mark

No. 770294

Trade Marks Act 1995

I, **ROSS WILSON, Registrar of Trade Marks,** hereby certify -

that the trade mark represented on this certificate has been registered as a Trade Mark, No. 770294 in the Register of Trade Marks for a period of ten years commencing **13 August 1998** and that **V.I.V. International S.p.A. of 37030 Cazzano Di Tramigna VR Via Costeggiola ITALY** has been entered in the Register of Trade Marks as the owner of the trade mark.

The trade mark is registered for the following goods and/or services:

Construction and installation of painting apparatus and plants; construction of anodizing plants being services in class 37

THE SCHEDULE

Decoral

Given under my hand and the seal of the Trade Marks Office on 11 June 1999

ROSS WILSON
REGISTRAR OF TRADE MARKS

Kongeriget Danmark

VR 2000 04270

Ovennævnte varemærke er registreret i det danske varemærkeregister.

Registreringens omfang fremgår af vedhæftede registerudskrift. Registreringen gælder i 10 år fra registreringsdatoen.

* * * * *

The above-mentioned trade mark is registered in the Danish Register of Trade Marks.

The extent of the registration appears on the attached extract. The registration is valid for 10 years from the date of registration.

28. september 2000

Patent- og Varemærkestyrelsen

Mogens Kring
Direktør

Oifig Na bPaitinní

Patents Office

Oifigí an Rialtais
Bóthar Hebron
Cill Chainnigh

Government Buildings
Hebron Road
Kilkenny

Tel: (00-353-56) 20111
Lo-Call: 1890-220225

Fax: (00-353-56) 20180
Lo-Call Fax: 1890-220120

TRADE MARKS ACT, 1996

Certificate of Registration of a Trade Mark

It is hereby certified that the Trade Mark to which this Certificate relates has been registered in the Register of Trade Marks in the name of **V.I.V. INTERNATIONAL S.p.A, Via Costeggiola, 37030 Cazzano Di Tramigna VR, Italy** under No: **212379** in respect of certain Goods and Services in Class(es) 2, 6 and 37.

A list of the Goods and Services to which the registration relates is appended to this Certificate.

Publication of this registration will appear in Journal No. **1898** dated **6 September 2000.**

This mark has been registered as of 12 August 1998.

Decoral

Dated this day 15 August 2000.
S. Fitzpatrick
Controller of Patents, Designs and Trade Marks.

AL MINISTERO DELL'INDUSTRIA DEL COMMERCIO E DELL'ARTIGIANATO — MODULO C
UFFICIO ITALIANO BREVETTI E MARCHI - ROMA
DOMANDA DI BREVETTO PER MARCHIO D'IMPRESA E DEPOSITO RISERVE — P

A. RICHIEDENTE (I)
1) Denominazione: V.I.V. INTERNATIONAL S.p.A. — SP
Residenza: 37030 CAZZANO DI TRAMIGNA VR — codice 00421250234

B. RAPPRESENTANTE DEL RICHIEDENTE PRESSO L'U.I.B.M.
cognome nome: TRUPIANO Roberto e TRUPIANO Federica
denominazione studio di appartenenza: BREVETTI EUROPA S.R.L.
via PIAZZA BERNINI n. 6 città MILANO cap 20133 (prov) MI

C. DOMICILIO ELETTIVO destinatario

D. MARCHIO denominazione: DECORAL + FIGURA
descrizione: ■ Il Marchio consiste nella parola DECORAL associata ad un motivo a righe, parzialmente ondulato, richiamante le lettere D ed A in maniera stilizzata, in qualsiasi dimensione, colore, com-
rivendicazione colori: NESSUNA

E. CLASSI DI PRODOTTI E SERVIZI — tot. classi 03
02 F/C Colori, vernici, lacche; metalli in fogli e in polvere per decoratori; pigmenti coloranti; prodotti di protezione contro la ruggine e la corrosione.
06 F/C Metalli comuni e loro leghe; metalli grezzi e semilavo-

F. PRIORITÀ: NESSUNA

G. RINNOVAZIONI

I. ANNOTAZIONI SPECIALI: NESSUNA

DOCUMENTAZIONE ALLEGATA
N. es.: 3, 8, 1, 1, 0, 0, 0, 0

Decoral

TRECENTOMILA
COMPILATO IL 30/07/1998 — FIRMA DEL (I) RICHIEDENTE (I)
CONTINUA SI/NO SI
DEL PRESENTE ATTO SI RICHIEDE COPIA AUTENTICA SI/NO SI

UFFICIO PROVINCIALE IND. COMM. ART. DI MILANO — codice 15
VERBALE DI DEPOSITO — NUMERO DI DOMANDA MI98C 007796
L'anno millenovecento NOVANTOTTO il giorno TRENTUNO del mese di LUGLIO
01 fogli aggiuntivi
ANNOTAZIONI VARIE DELL'UFFICIALE ROGANTE
IL DEPOSITANTE — L'UFFICIALE ROGANTE — PETRALIA

Τόμος 566

Για Δημοσίευση ΔΕΒΙ 7/97

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΕΜΠΟΡΙΟΥ
ΤΜΗΜΑ ΚΑΤΑΘΕΣΗΣ ΣΗΜΑΤΩΝ

ΔΗΛΩΣΗ ΑΛΛΟΔΑΠΟΥ ΣΗΜΑΤΟΣ

Αριθμός Σήματος 125639

Ημερομηνία 7 Αυγούστου 1995 Ώρα 11.30

Συμβατική Προτεραιότητα

Ημερομηνία ______ Αριθμός κατάθεσης ______ Χώρα ______

Δικαιούχος (ονοματεπώνυμο ή επωνυμία) VERNICIATURA INDUSTRIALE VENETA S.p.A.

Κατοικία ή έδρα (οδός, αριθμός, πόλη, Τ.Κ. χώρα) CAZZANO DI TREMIGNA, VERONA, ΙΤΑΛΙΑ.

Πληρεξούσιος Δικηγόρος Παναγιώτα Καραγκιουλέ, Ηρακλείτου 6, Αθήνα 106 73

Αντίκλητος Ιωάννης Σακελλαρίδης, Ηρακλείτου 6, Αθήνα 106 73

Ημερομηνία δικασίμου Διοικητικής Επιτροπής Σημάτων 1 Δεκεμβρίου 1995

- [X] λεκτικό
- [X] απεικόνιση
- [ ] αριθμός
- [ ] ηχητικό
- [ ] συσκευασία ή σχήμα
- [ ] με ορισμένη έγχρωμη σύνθεση
- [ ] συλλογικό

Decoral

Instituto Mexicano de la Propiedad Industrial

TITULO DE REGISTRO DE MARCA

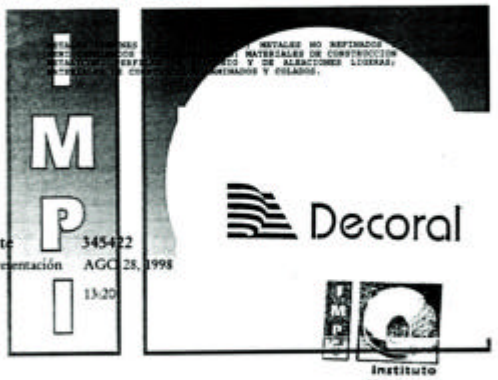
Titular V.I.V. INTERNATIONAL S.P.A.

Nacionalidad ITALIANA
Domicilio VIA COSTEGGIOLA CAZZANO DI TRAMIGNA VR. C.P. 37030 ITALIA
Establecimiento VIA COSTEGGIOLA CAZZANO DI TRAMIGNA VR. C.P. 37030 ITALIA

Marca 603573 Tipo de marca MIXTA

Signo distintivo DECORAL y Diseño

Clase 06
Se aplica a



Expediente 345422
Fecha de presentación AGO 28, 1998
Hora 13:20

Los efectos de este registro tienen una duración de diez años contados a partir de la fecha de presentación y el mismo es renovable de acuerdo a las disposiciones legales aplicables.

MEXICO D.F., A 26 DE MARZO DE 1999

LA DIRECTORA DE MARCAS

LIC. ESPERANZA RODRIGUEZ CISNEROS.

OGG

TRADE MARKS REGISTRY

REGISTRATION CERTIFICATE

Trade Marks Act 1994 of Great Britain and Northern Ireland

The mark shown below has been registered under No. 2174133 as of the date 06 August 1998.

Decoral

The mark has been registered in respect of:

Class 06:
Common metals and their alloys; unrefined and semi-finished metals and their alloys; metal building materials; window and door locks; aluminium and light alloys profiles; rolled and cast building materials, but not including any such goods being tiles.

Class 37:
Construction and installation of painting apparatus and plants; construction of anodising plants.

In the name of V.I.V. International S.p.A.
Incorporated in Italy

Sealed this day at my direction

ALISON BRIMELOW, REGISTRAR
DATE: 3 September 1999

KONGERIKET NORGE

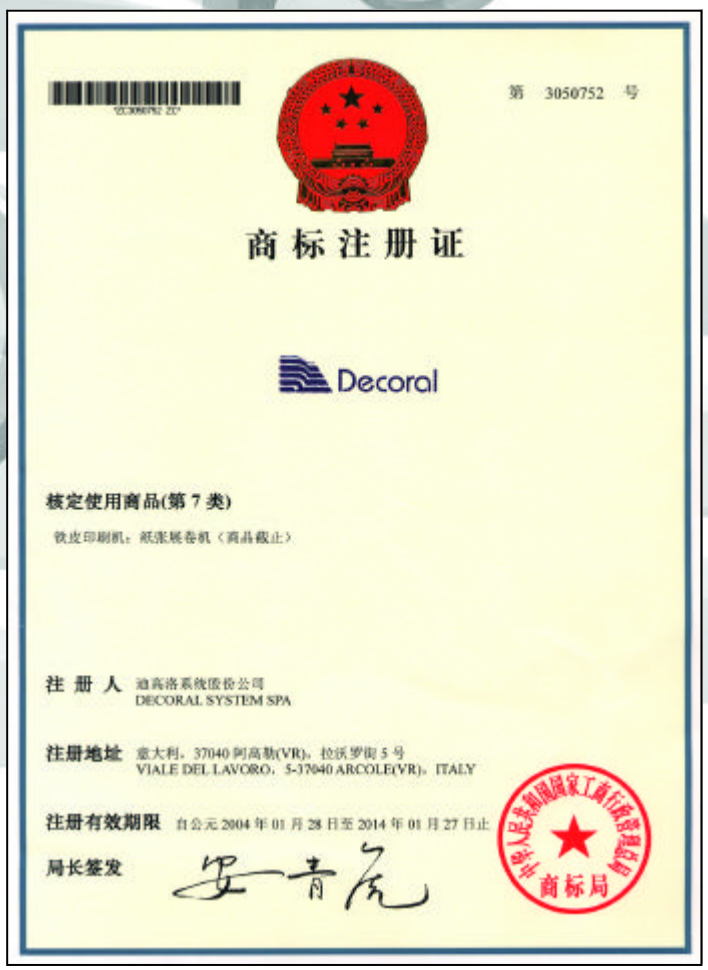
REGISTRERINGSBREV

Varemerke reg.nr.: 202114

I henhold til varemerkeloven av 3. mars 1961 er Deres varemerke registrert med opplysninger som angitt på etterfølgende sider. Viktige opplysninger om varemerkeregistrering gis på siste side.

PATENTSTYRET
Styret for det industrielle rettsvern

Jørgen Smith
Direktør



第 3050752 号

商标注册证

Decoral

核定使用商品(第 7 类)

胶皮印刷机；纸张展卷机（商品截止）

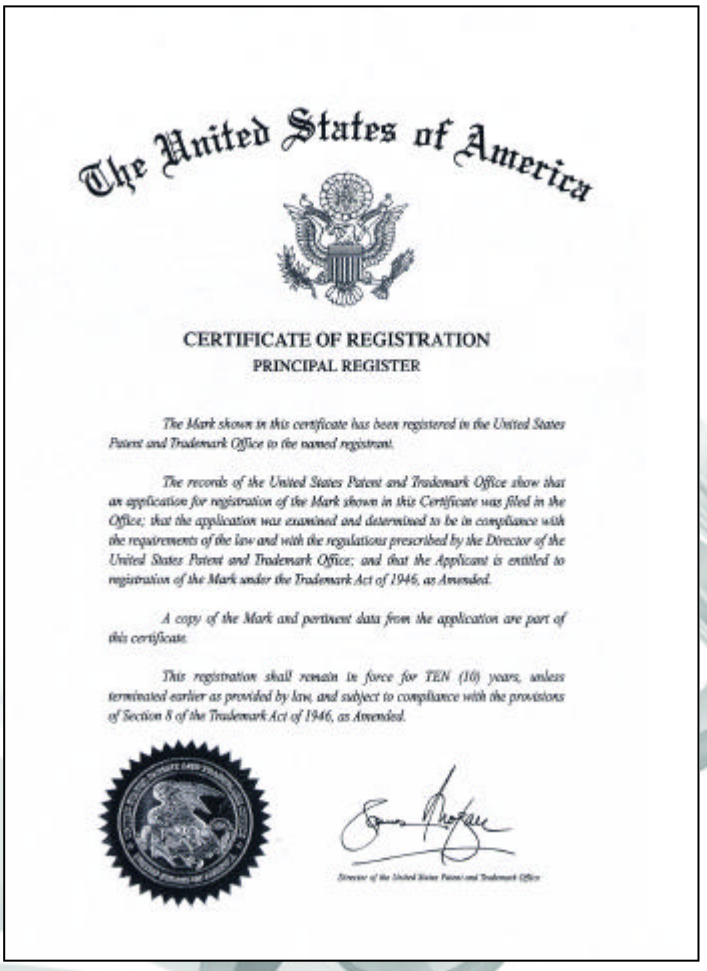
注 册 人 迪高洛系统股份公司
DECORAL SYSTEM SPA

注册地址 意大利，37040 阿高勒(VR)，拉沃罗街 5 号
VIALE DEL LAVORO，5-37040 ARCOLE(VR)，ITALY

注册有效期限 自公元 2004 年 01 月 28 日至 2014 年 01 月 27 日止

局长签发

中华人民共和国国家工商行政管理总局 商标局



The United States of America

CERTIFICATE OF REGISTRATION
PRINCIPAL REGISTER

The Mark shown in this certificate has been registered in the United States Patent and Trademark Office to the named registrant.

The records of the United States Patent and Trademark Office show that an application for registration of the Mark shown in this Certificate was filed in the Office; that the application was examined and determined to be in compliance with the requirements of the law and with the regulations prescribed by the Director of the United States Patent and Trademark Office; and that the Applicant is entitled to registration of the Mark under the Trademark Act of 1946, as Amended.

A copy of the Mark and pertinent data from the application are part of this certificate.

This registration shall remain in force for TEN (10) years, unless terminated earlier as provided by law, and subject to compliance with the provisions of Section 8 of the Trademark Act of 1946, as Amended.

Director of the United States Patent and Trademark Office

Office de la propriété intellectuelle du Canada
Un organisme d'Industrie Canada

Canadian Intellectual Property Office
An Agency of Industry Canada

Marques de commerce
Certificat d'enregistrement

La présente atteste que la marque de commerce identifiée dans l'extrait ci-joint, tiré du registre des marques de commerce, a été enregistrée et que ledit extrait est une copie conforme de l'inscription de son enregistrement.
Conformément aux dispositions de la *Loi sur les marques de commerce*, cette marque de commerce est renouvelable tous les quinze ans à compter de la date d'enregistrement.

Trade-marks
Certificate of Registration

This is to certify that the trade-mark, identified in the attached extract from the register of trade-marks, has been registered and that the said extract is a true copy of the record of its registration.
In accordance with the provisions of the Trade-marks Act, this trade-mark is subject to renewal every 15 years from the registration date.

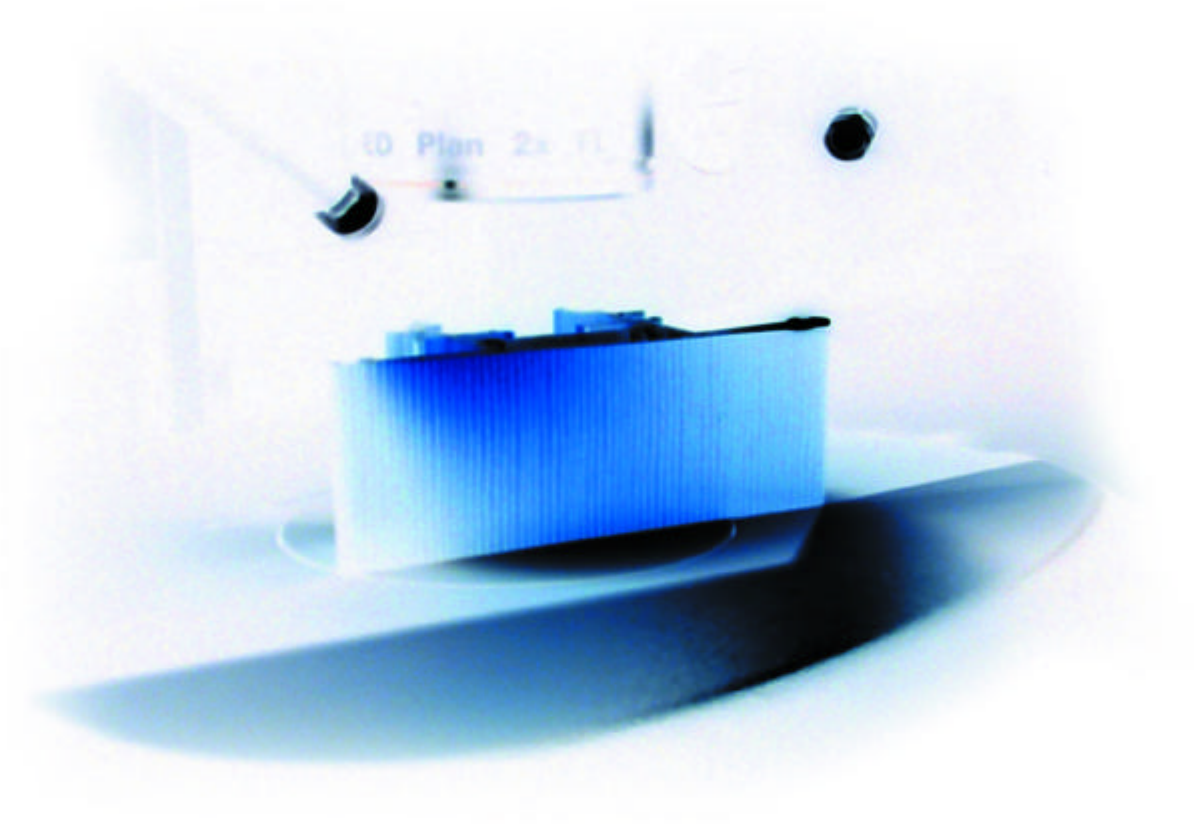
Decoral

Numéro d'enregistrement / Registration Number: TMA570,018
Numéro de dossier / File Number: 887190
Date d'enregistrement / Registration Date: 31 oct/Oct 2002

Registraire des marques de commerce / Registrar of Trade-marks

Canada

OPIC CIP



Decoral®

Italy

Decoral System srl

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Tel. +39 045 7639111
Fax. +39 045 7639100
Info: info@decoral-system.com

U.S.A.

Decoral System Usa Corporation

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Info: info-usa@decoral-system.com

Quality