



www.cchcubic.com



www.Prepaintaluminum.com



www.Prepaintgalvanize.com

成昌興企業股份有限公司

CHENG-CHANG-HSING INDUSTRIAL CO., LTD.
(CHANG-HUA)
彰化縣和美鎮頭前里和頭路612巷37號
NO.37, Lane 612 He-tou Road, Tou-cian Village,
He-mei Town, Chang-hua County 50851, Taiwan
TEL: 886-4-7573111 FAX: 886-4-7575661
E-mail: 8682@cchcubic.com.tw
info@cchcubic.com.tw

彩衣塑膠制品有限公司

CAI-YI PLASTIC PRODUCT CO., LTD. (DONG-GUAN)
廣東省東莞市大朗鎮松木山黃竹溪工業區美景西路187號
No.187, Meijing West Road, Zhu xi Industrial Area,
Song Mu Moutain, Dalang Town, Dongguan, Guangdong
Province, China
TEL: 86-769-83191428 FAX: 86-769-83130428
E-mail: cchcubic@ple.com.tw

IFFA

成昌興企業股份有限公司

CHENG-CHANG-HSING INDUSTRIAL CO., LTD.

- 水轉印膜 WATER TRANSFER PRINTING FILM
- 熱塑轉印膜 THERMOFORM TRANSFER PRINTING FILM
- TT金屬密著膜 TT METAL LAMINATED FILM
- ET模內複合膜 ET IN MOLD COMBINATION FILM
- 彩色防水透濕膜 COLORFUL BREATHABLE & WATERPROOF FILM
- 水轉印專業加工 PROFESSIONAL WATER TRANSFER PRINTING SERVICE
- 整廠設備技術輔導 EQUIPMENT & TECHNOLOGY TRANSFER



IFFA 彩衣 Company Profile

CCH, established in 1982 in Chang Hua city of Taiwan with its original name was "Chang Yi Industrial Firm", has renewed itself under the name "Cheng Chang Hsing Industrial Limited Company" since 1996. In 1999, CCH founded a WTP factory named "Cai Yi Plastic Company" by its film brand "彩衣" in Dong Guan city of China for water transfer printing service & film marketing. In 2007, CCH relocated to a new manufacturing facility in Taiwan and set 3 production lines to increase productivity, simultaneously, Department of R&D was set for product invention and International Trade Department for a better and efficient service to our clients worldwide. In the same year, a marketing office was instituted in Kun Shan of China to provide a more convenient service and connection with Shanghai.

CCH has operated surface processing and material combination for more than 25 years and now we are an experienced & innovative film provider for venues throughout Asia, Europe, America, Africa and Oceania. As a leading company of printing film, CCH always devotes in process improvement and quality enhancement. With continuous Research & Development on the material ingredients, CCH picks the applicable film for printing and designs the proper equipment for the new finishing process. Theoretically, we keep cooperation with universities, research centers, and government financial department to share information; pragmatically, we examine the film quality and remove the process barrier in our own factory. All of our "Know How" is patented.

We think CCH not only as a film supplier, but also a partner with passion in the service of invention, manufacture, and technology consultation.

www.cchcubic.com
www.Prepaintaluminum.com
www.Prepaintgalvanize.com

WATER TRANSFER PRINTING FILM



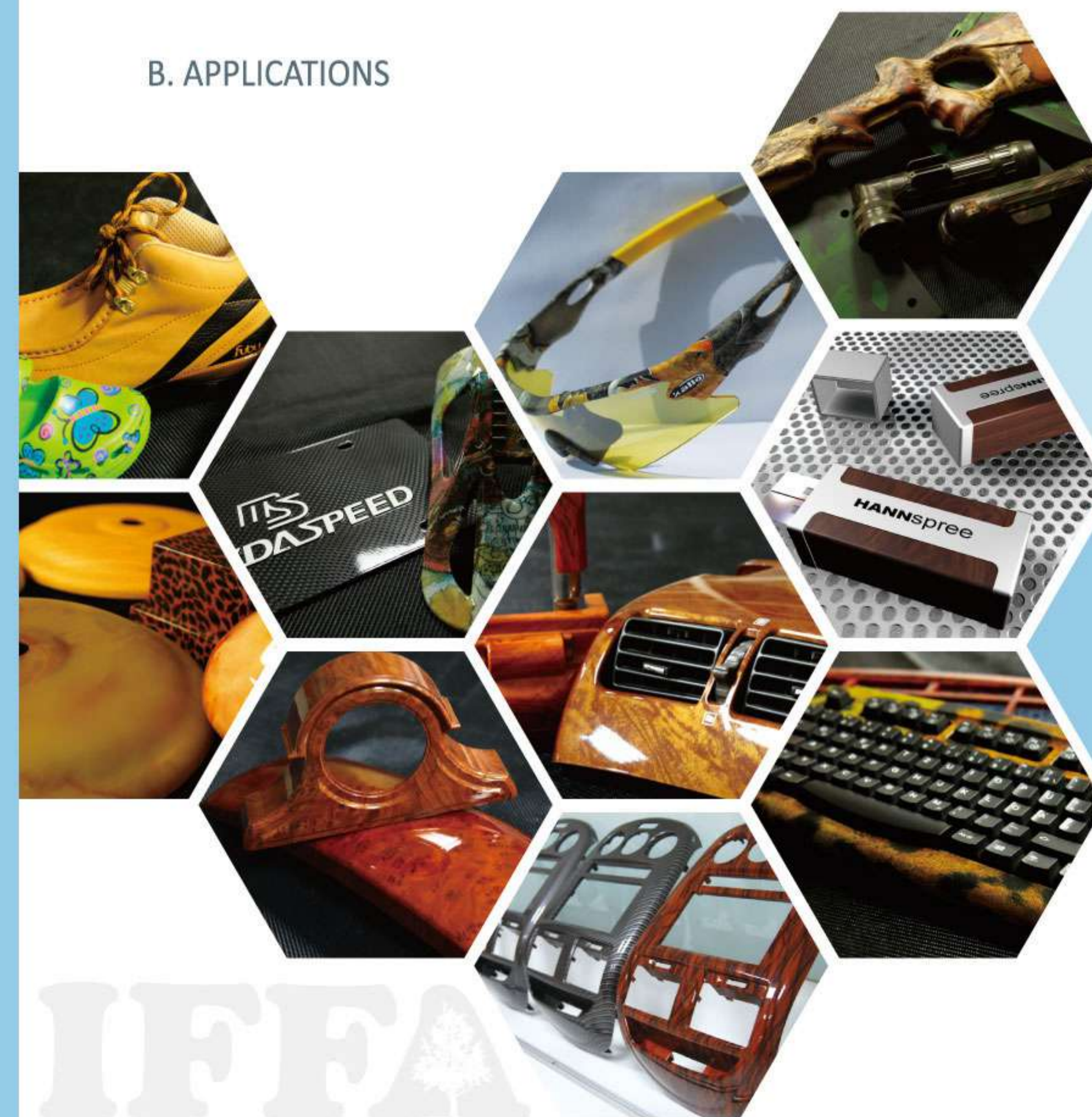
IFFA

A. INTRODUCTION TO WATER TRANSFER PRINTING FILM

Water Transfer Printing is also known as Cubic Printing, which can achieve the excellent effect on cubic materials. Water Transfer Printing not only provides much better performance than traditional printing on curved surface, but also reduces the production cost.

Water Transfer Printing leads products to mimic real thing such as wood, stone or metal, and the finished products are waterproof and not easy to be faded. The film is combustibile, recyclable, will be naturally decomposed by humidity and microorganism once buried in the earth after 3~5 years. Therefore, it is also a green product for environment.

B. APPLICATIONS



IFFA

WATER TRANSFER PRINTING FILM



IFFA

Step

- 1 Base Coating 
- 2 Film Selection 
- 3 Place Film 
- 4 Activation 
- 5 Transfer 
- 6 Soaking 
- 7 Washing 
- 8 Drying 
- 9 Top Coating 

C. THE TECHNICAL PROCESS OF WATER TRANSFER PRINTING

1. Base Coating :

Mix well the paint obtaining the color that meets customer's request. Uniformly spray painting on the work pieces in according with the materials scheduled for water transfer printing.

2. Film Selection:

Select printing film which customer need or customize with digital printer for individual printable image of film for transfer job.

3. Film Laying:

Cut the film in proper size to fit work piece and lay it on water, and check that there is no gap between film side and water side to avoid bubbles generated.

4. Activation:

After laying the film on water for 60seconds to 90seconds, spray the activator uniformly on the film to make the paint become soft and elastic.

5 Dipping:

Fix the material on the jig, then aim at the activated paint and dip stably by proper angle until the printing required part under water.

6. Soaking:

Soaking the working pieces in the water 30 second for ink adherent.

7. Rinsing:

Rinse the printed material by washing machine until no film residue on the surface, and dehydrate it by baking.

8. Drying:

Bake the work pieces just transfer painted to dehydrate them. (or let them dry naturally)

9. Top Coating:

Spray a layer of protective varnish based on the properties of work pieces to increase their weather abilities.

WATER TRANSFER PRINTING MACHINES MANUAL SYSTEMS



IFFA



MANUAL DIPPING TANK

CHMT-12

- 1.Machine size: 145(L)x77(W)x85(H)cm
- 2.Inside dimensions: 80(L)x68(W)x68(H)cm
- 3.Work piece: 77(L)x62(W)cm
- 4.Printing speed 1transfer /min

CHMT-22

- 1.Machine size: 237(L)x98(W)x85(H)cm
- 2.Inside dimensions: 170(L)x87(W)x68(H)cm
- 3.Work piece: 173(L)x81(W)cm
- 4.Printing speed 1transfer /min

CHMT-27

- 1.Machines size: 284(L)x130(W)x103(H)cm
- 2.Inside dimensions: 220(L)x119(W)x86(H)cm
- 3.Work piece: 219(L) x114(W)
- 4.Printing speed 1 transfer /min

CHMT-15

- 1.Machine size: 169(L)x79(W)x85(H)cm
- 2.Inside dimensions: 110(L)x68(W)x68(H)cm
- 3.Work piece: 107(L)x62(W)cm
- 4.Printing speed 1transfer /min

CHMT-25

- 1.Machine size: 266(L)x130(W)x85(H)cm
- 2.Inside dimensions: 200(L)x119(W)x68(H)cm
- 3.Work piece: 113(W)x199(L)cm
- 4.Printing speed 1transfer /min

CHMT-35

- 1.Machine size: 370(L)x130(W)x97(H)cm
- 2.Inside dimensions: 300(L)x119(W)x80(H)cm
- 3.Work piece: 303(L)x113(W)cm
- 4.Printing speed 1transfer /min



SPECIAL FEATURES

- 1.Auto water surface cleaning
- 2.Digital temperature
- 3.Timer with alarm
- 4.Emergency stop design
- 5.Energy class A
- 6.Euro-CE standard
- 7.Place of origin: TAIWAN



* Optional equipment



WATER TRANSFER PRINTING MACHINES MANUAL SYSTEMS



IFFA

MANUAL WASHING MACHINE

Machine size: 264(L)x120(W)x160(H)cm
Work piece: 150(L) x 108(W)

Special features:

1. European style design
2. Multiple-angle washing makes products clearer than traditional type
3. Flexible cover in "Easy To Repair" design
4. Place of origin: TAIWAN
5. Power : 5kw
6. Air pressure : 6kg/cm²

Option:

1. European standard accessories



CE

THERMOFORM TRANSFER PRINTING FILM



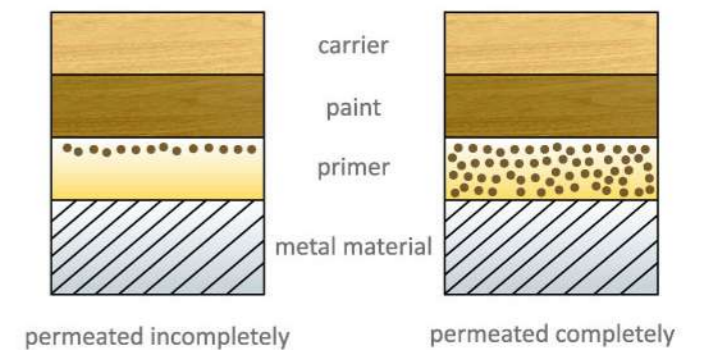
IFFA



A. INTRODUCTION TO THERMOFORM TRANSFER PRINTING FILM

Thermoform Transfer Printing Film is composed of paint and film carrier, the paint can be sublimated and transferred to the primer of metal material through thermal energy.

The permeating depth of paint into primer is decided by the temperature, pressure, time and the compatibility, and it will affect the weather ability, abrasion resistance and ultraviolet resistance of finished product surface. Traditional Heat Transfer process by transfer paper can only permeate the shallow degree of primer, but IFFA Thermoform Transfer Printing Film can lead much better performance.



permeated incompletely

permeated completely

WATER TRANSFER PRINTING MACHINES AUTOMATIC SYSTEMS



IFFA



AUTOMATIC WATER TRANSFER PRINTING MACHINE

CHAM-500

- Machine size: 800(L)x150(W)x300(H)cm
- Work piece: 100(L) x 60(W)cm
- Printing speed: 1-3m/min
- Power: 18kw
- Air pressure: 6kg/cm²

CHAM-500-S1

- Machine size: 800(L)x150(W)x300(H)cm
- Work piece: 100(L) x 60(W)cm
- Printing speed: 1-3m/min
- Power: 18kw
- Air pressure: 6kg/cm²

CHAM-500-S

- Machine size : 800(L)x150(W)x300(H)cm
- Work piece: 100(L) x 60(W)cm
- Printing speed: 1-3m/min
- Power: 18kw
- Air pressure: 6kg/cm²

CHAM-1000

- Machine size: 800(L)x200(W)x300(H)cm
- Work piece: 100(L) x 110(W)cm
- Printing speed: 1-3m/min
- Power: 18kw
- Air pressure: 6kg/cm²

Special features:

- Full automatic
- Activating first
- Easy operation
- Low cost for maintenance
- High capacity and low loss



CE



WATER TRANSFER PRINTING MACHINES AUTOMATIC SYSTEMS



IFFA



AUTOMATIC WASHING CONVEYER



- Machine size: 815(L)x152(W)x170(H)cm
- Work pieces: 150(L)x120(W)cm
- European style design
- Multiple-angle washing makes products clearer than traditional type
- Flexible cover in "Easy To Repair" design
- Place of origin: TAIWAN
- Washing speed: 1-3m /min
- Power: 5kw
- Air pressure: 6kg /cm²

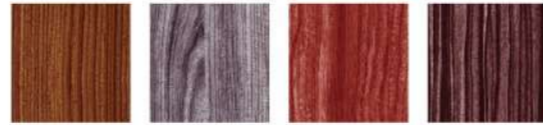
Options:

- Heat drying function
- Three sections of washing
- European standard accessories



CE

THERMOFORM TRANSFER PRINTING FILM



B. APPLICATIONS



C. THE TECHNICAL PROCESS OF THERMOFORM TRANSFER PRINTING

a. Work Flow of Prior Treatment

1. Cleanness: In the purpose of adhesion enhancing and rusty-proof, apply de-fouling, degreasing and rusty moving to different material.
2. Baking & Base Coating: Process the work piece by powder coating after moisture drying, and then set it in the oven for baking.

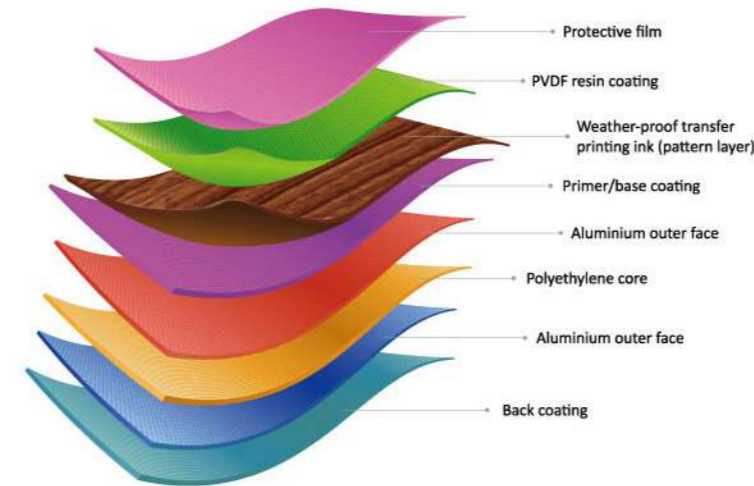
b. Work Flow of Thermoforming Transfer Printing

1. Slitting: Place the film into the slitter and get slit according to the required size.
2. Sealing: Seal the slit film as a sheath to avoid the blisters generated to affect the complete grain during heating process.
3. Transfer Printing: Put the work piece into the film sheath and put on the working frame, then pump out the air and make it be in a vacuum. Then, push the working frame into the Thermal Transfer Printing machine, make the work piece be baked in high temperature for a period of time and the paint will completely permeate the primer. Remove the film after heating process, the work piece will be quenched and be a finished product.

Outdoor Release Transfer Printing Film



A. Introduction of Outdoor Release Transfer Printing Film



- Good adhesiveness.
- Stable transfer printing effect.
- Continuous mass production
- Polished or matt effect.
- Great re-coating.
- Consistency of color.
- Transfer printing temperature and pressure are controlled by digital panel.
- The production line can be connected with base coating and top coating line.
- The continuous transfer printing can apply on coils or sheets.
- Easy to renew the materials.
- Fit different thickness and materials, such as iron or aluminum.



B. Outdoor release paper film properties and characteristic

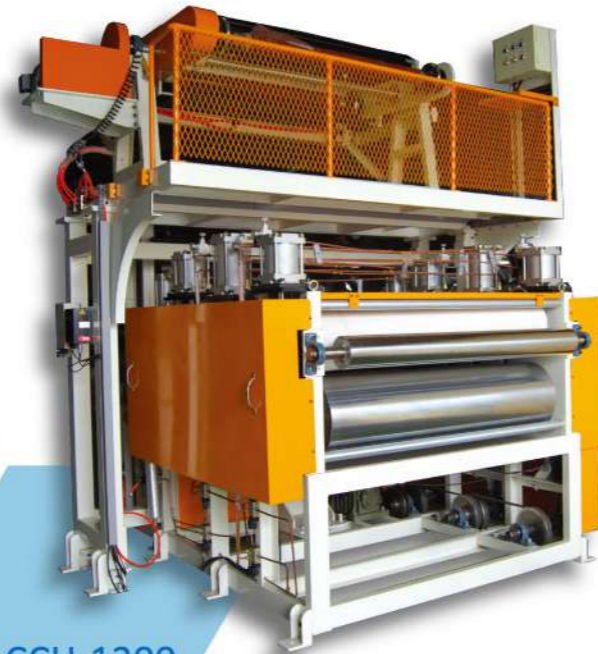
Test item	Test Standard	Test condition and method
Boiling resistance test	No peelings and breaks	Boil the cross-hatching surface for 5 hours and then implement the peeling test by 3M tape
Pencil hardness test	Stronger than 2H	ASTM D3363 Pierced hardness
Erichsen test	No peelings and breaks	Cut 5 x 5mm squares on the surface and cup it convexly
Bending test	No peelings and breaks	180°/0 T
Salt spray test	No blisters outside the crossed area (2mm)	Seal four sides and designated "x" on the metal layer, then spray continuously (35 ± 2 °C, 120h/240h)
Acid & Alkali resistance test	No cracks, crumples, blisters, and abnormal colors	Seal four sides of the sample and soak it in 5% hydrochloric acid and sodium hydroxide for 24 hours. Then soak the sample in pure acetic acid and ethanol for a hour
Chemical resistance test	No cracks, crumples, blisters, and abnormal colors within 15 minutes	Test the sample by the MEK back forth for 100 times
Weathering (QUV) test	No noticeable fading, gloss and chalking	ASTM G154-06 Test: over 5300 hours ASTM D523-08 Test: Keep 286% gloss over 6000 hours ISO 105-A02:1993 Gray Scale: Level 3~4 ASTM D4214-98 Test: No chalking over 5300 hours

Outdoor Release Transfer Printing Film



IFFA

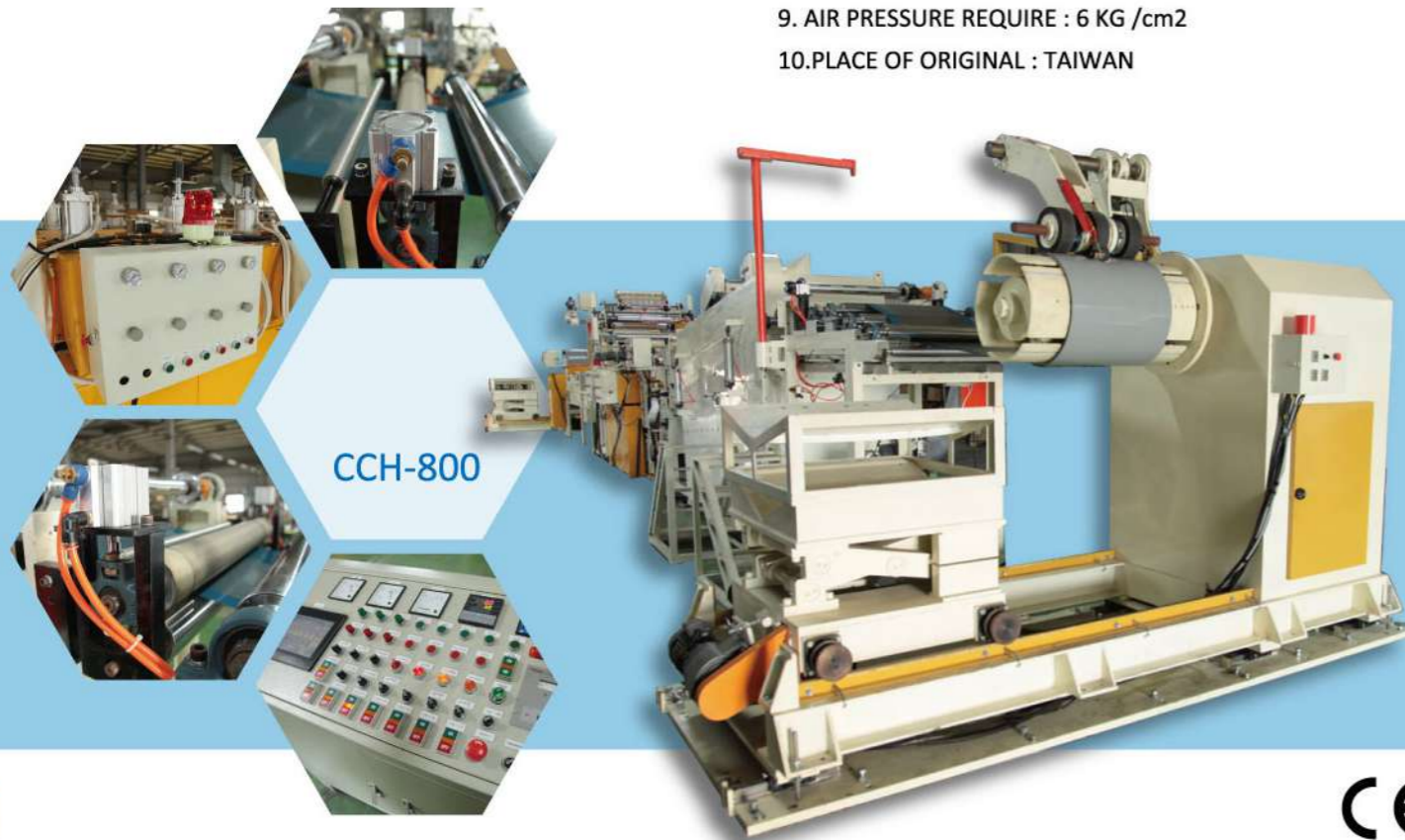
C. Release Transfer Printing Equipment and Process (The equipment can also be modified to fit customers' needs)



CCH-1200

1. MACHINES SIZE : 2700(L)*2730(W)*3700(H)mm
2. A/B AXLE FILM EXCHANGER
SIZE : (L)2100*(W)2350mm
3. BLANK FILM DEVICE
SIZE : (W)1750*(H)100*(D)450mm
4. POWER : 415V/50HZ
5. TRANSFER MATERIAL : ALUMINUM , GALVANIZE , STEEL
6. MAXIMUM WIDE TRANSFERABLE : 1500mm

7. TRANSFER MATERIAL THICKNESS: 0.2~0.5mm
8. TRANSFER SPEED : 25M/ MIN
9. AIR PRESSURE REQUIRE : 6 KG /cm²
- 10.PLACE OF ORIGINAL : TAIWAN



CCH-800

CE

Outdoor Release Transfer Printing Film



IFFA

D. Application of Outdoor Release Transfer Printing Film

Architecture (Building Materials) : external wall \ column \ ceiling \ OA partition \ store decoration \ counter \ plastic-aluminum composite panel \ powder coating panel \ roller shutter \ elevator \ escalator \ (MDF)medium density fiberboard \ prefabricated house \ ATM.

Electric appliances : refrigerator \ washing machine \ microwave \ water dispenser \ stereo system ..etc.

Transportation : Campervan \ Interior decoration board \ yacht decoration \ mudguard of motorcycle.

3C Products : communication device \ computer.

Others : display cabinet \ display shelf.

E. Advantages and Strength

- Light material
- Soundproof
- Good performance in flatness
- Durable
- Easy to clean and maintain
- Excellent heat insulation
- Anti-mildew and non-toxic
- Great for processing
- Numerous patterns lead brilliant visual effect.
- Great weathering-resistance helps less fading on vivid colors.

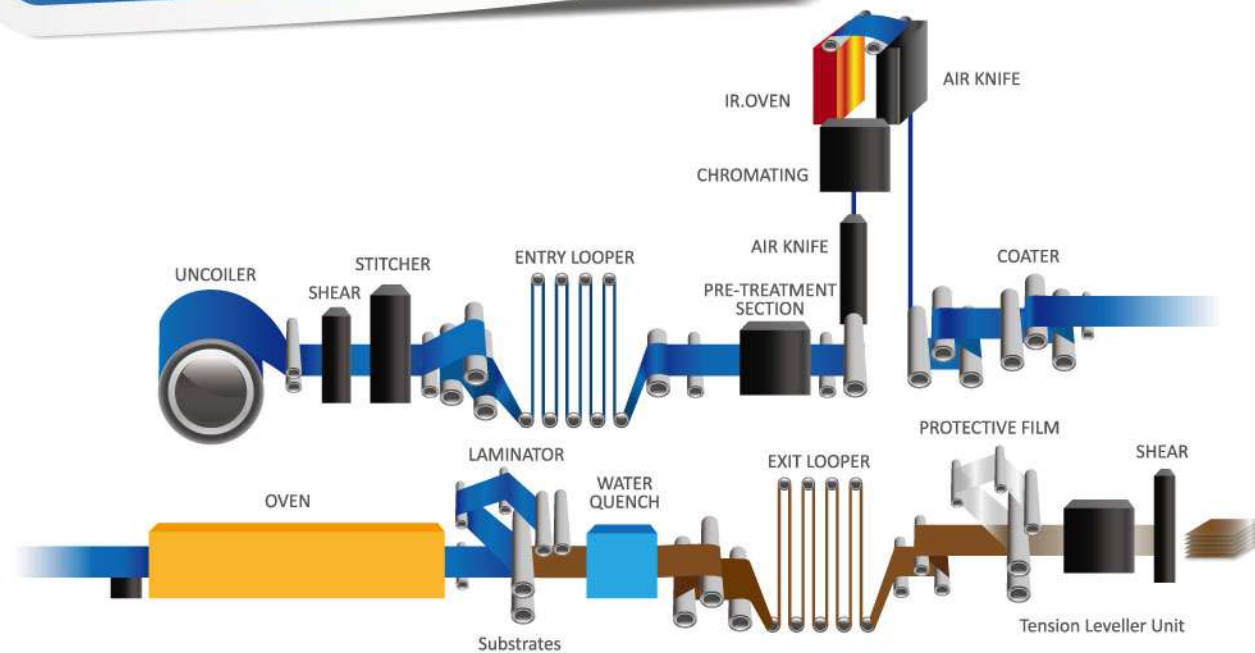
F. Patterns of Outdoor Release Transfer Printing Film



TT METAL LAMINATED FILM



IFFA



C. THE TECHNICAL PROCESS OF METAL LAMINATION

The finishing process of IFFA TT Film by a synthetic equipment integrates pre-treatment, coating, baking, lamination, protection and cutting in one time decoration and production for steel panels or aluminum-plastic panels.

a. Prior Treatment:

Uncoil the continuous metal roll in the machine, and proceed it by chemical processing to improve the later adhesion between the metal surface and the primer.

b. Primer Coating:

Dry the metal roll by air knife and infrared rays, and coat it with primer and then for baking.

c. TT Film Lamination:

Draw TT Film into the laminator for the lamination with baked metal roll.

d. Plastic Elastomer Extrusion:

Induct the liquid PE or PP and extrude the plastic elastomer on the other aluminum roll (this step is only for aluminum-plastic panels).

e. Combination:

Combine the TT film laminated aluminum roll and the other roll with plastic, and quench it after combination (this step is only for aluminum-plastic panels).

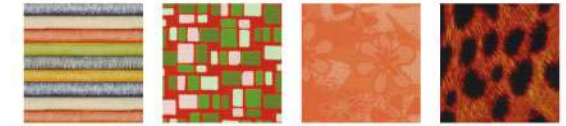
f. Cutting:

Add one more membrane on the surface of finished metal roll for protection, then scrape the unnecessary film and cut the metal roll into panels by required size.

D. WHAT CCH OFFERS

IFFA TT Metal Laminated Film is usually applied to building materials and household appliances, therefore, CCH supplies over 100 popular patterns such as wood grain, stone grain, metal grain and carbon fiber. However, CCH designers also can provide the service of customized designs. Besides, CCH technical team will assist customers to adjust the finishing process for efficiency and have the correct operation for mass production.

ET IN MOLD COMBINATION FILM



IFFA

A. INTRODUCTION TO ET IN MOLD COMBINATION FILM

In Mold Combination is a revolutionary product exclusively developed by CCH, integrates various of surface decoration for cubic material such as in mold foaming, painting, transfer printing, clear coating., etc. This single forming process increases the efficiency stably, and saves production time and working cost with simple equipment.

The finished product decorated by IFFA In Mold Combination Film has excellent abrasion resistance and flexibility. By the examination report, it is over level 4 on anti-yellowing and achieves -30°C on cold-resistance. There is no plasticizer in film composition which probably cause "migration", to avoid any problem on adhesion. It is non-toxic green product with pure molecular structure, and there is no air pollution on incineration. The film will be naturally decomposed by humidity and microorganism once buried in the earth after 3~5 years.



B. THE TECHNICAL PROCESS OF IN MOLD COMBINATION

a. Pattern Selection

Pick up the proper pattern, and cut the film according to the foaming material size.

b. Mold Preheating

Clean the mold appliances and preheat the mold, then open the splint and the lid.

c. Place The Film

Place IFFA In Mold Combination Film on bottom of the mold.

d. Fix The Film

Buckle the splint into the bottom, and check if the film fixed well.

e. Vacuum

Turn on the suction device, and then the film will tightly close to the bottom in vacuum.

f. Pour PU Liquid

Pour PU Liquid into the mold, and then buckle the lid into the splint and the bottom.

g. Trim The Product

After the PU foaming, open the mold to take out the finished product and trim the spare film.



C. APPLICATIONS



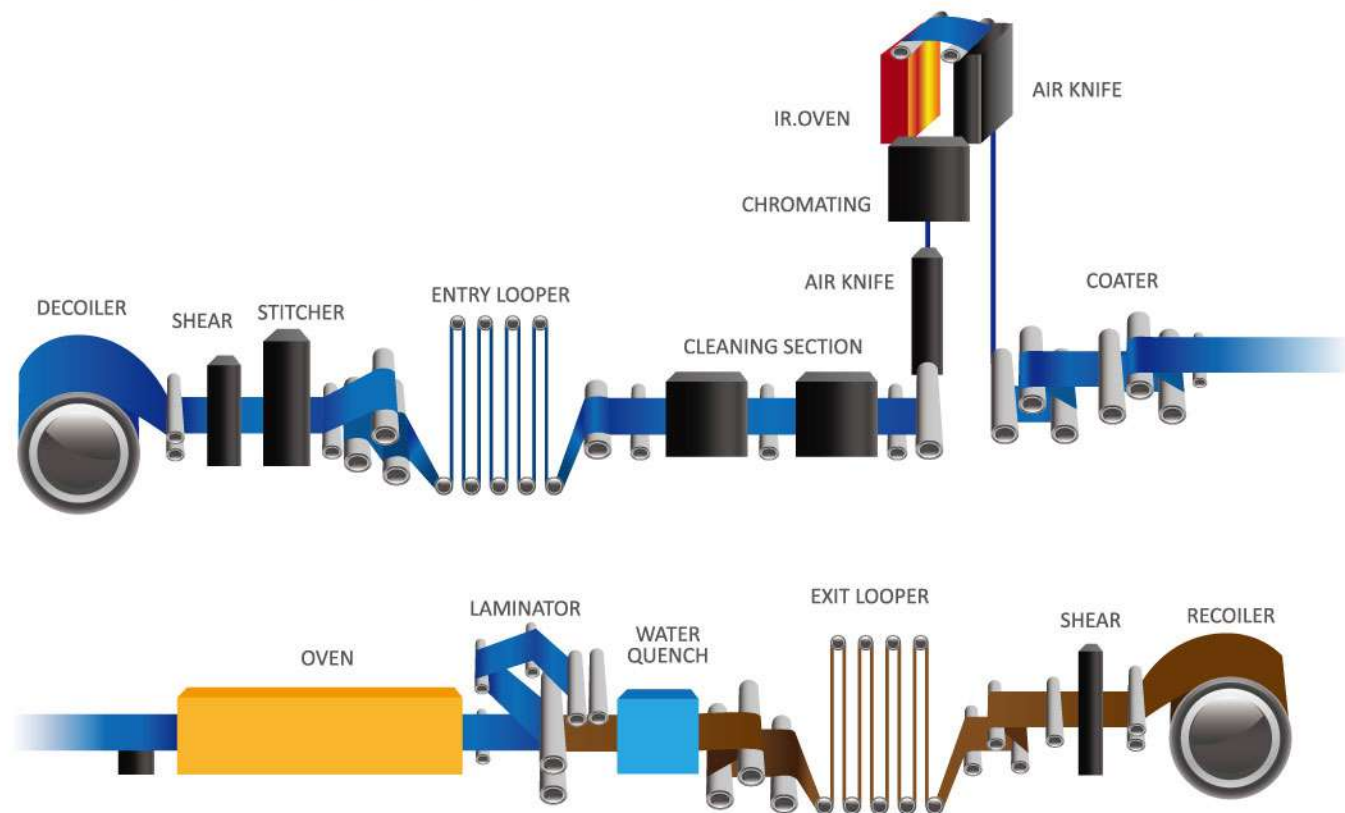
Outdoor Release Transfer Printing Film



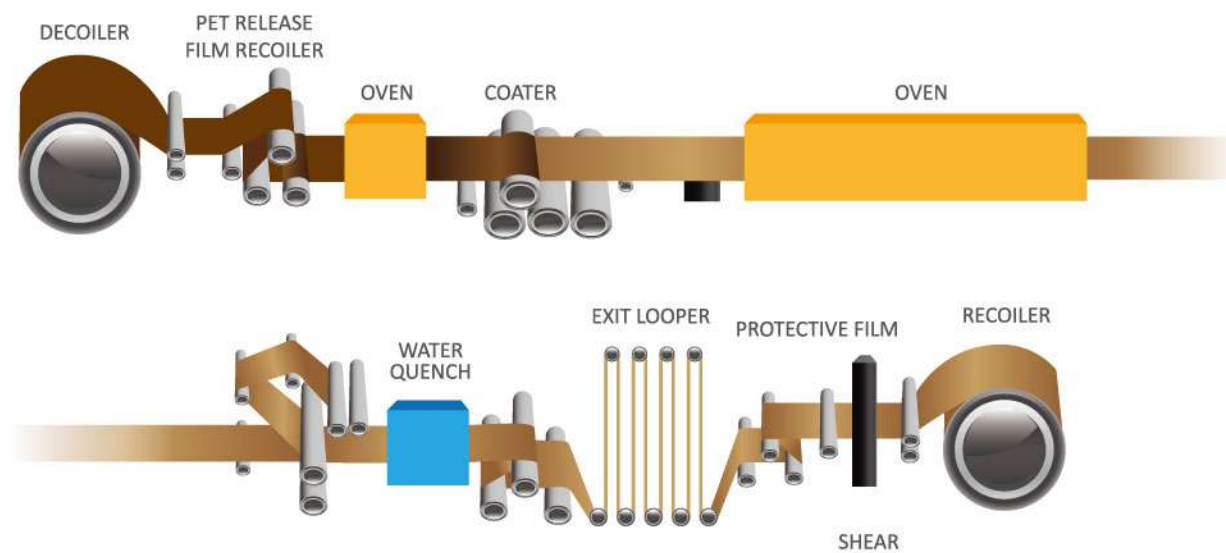
IFFA

G. Release Transfer Printing Equipment and Process (The equipment can also be modified to fit custom's needs)

Continuous Coil Coating and Lamination Process Line



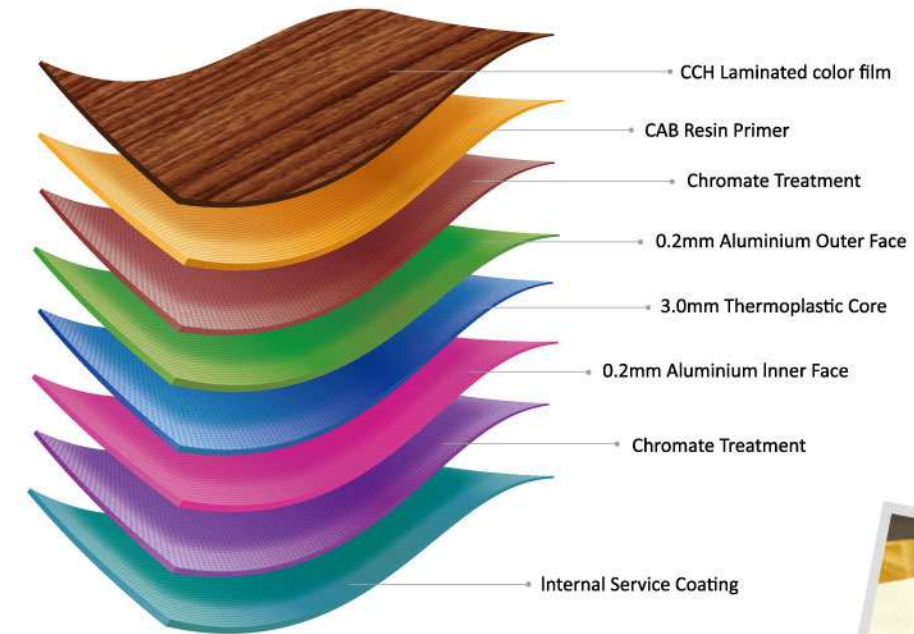
Continuous Coil Coating Line



TT METAL LAMINATED FILM



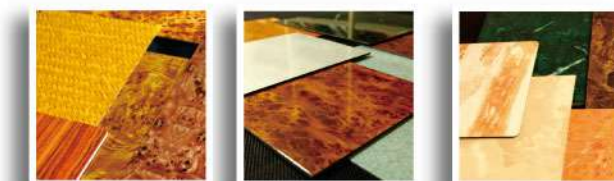
IFFA



A. INTRODUCTION TO TT METAL LAMINATED FILM

IFFA TT Metal Laminated Film is abbreviated as TT Film, it is made up by special co-extrusive polyester film and specific formulated paint from CCH. TT Film is possessed of good adhesiveness, the flexibility, and has the outstanding anti-UV, anti-chemical, anti-scratch, dirt-proof and weather-proof characteristics. The process to decorate metal material is simple, and integrates coating and lamination. The finished products with brilliant visual effect usually accompany additional value, and the film material is green, no-toxic, and no halogen even can be used for food containers, with the extreme possibility to replace PVC or PVDF.

B. APPLICATIONS



IFFA