

# Back to Basics: Platemaking Efficiencies at the Tradeshop

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FPPA: February 19, 2007

Colleen Larkin Twomey

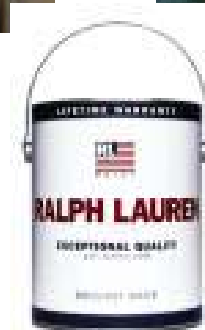
# What keeps Brand Owners up at night?

- Consumers!!!!
  - Engage consumer at beginning of product relationship
  - Package is silent salesperson
  - Consumer preferences can change on a whim
  - Each year there are new trends
  - Trends have power



# Top Ten Trends Across All Retail Channels

- Fast Pay & Self Service
- Cost polarization
- Blurring of sectors
- High speed retail
- Generational crossover
- RFID
- Mass customization/Personalization
- Brand Politics
- Brand/Product Experience
- Women



YOU COLOR YOUR WORLD



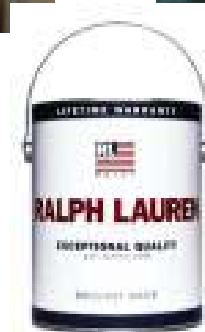
**YES WE CAN**

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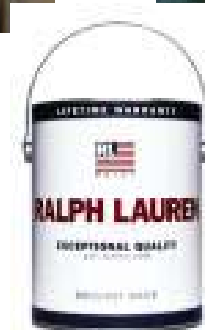
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# What keeps Box Plant managers up at night?

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- On-time Deliveries
  - Get the boxes out the door!
- Productivity
  - First Box set-up
- Cost/Price
  - Are you kidding? This is corrugated!
- Quality
  - Oh, and we have to print, too....
- Safety and Sustainability
  - Recordables and Wal-mart



# What keeps Trade Shop owners up at night?

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- On-time Deliveries
  - Get the plates out the door!
- Productivity
  - Lead times? What lead times?
- Cost/Price
  - Are you kidding? This is corrugated!
- Quality
  - We don't want those plates back!
- Safety and Sustainability
  - When Wal-mart speaks.....





# So, how can we all sleep better?

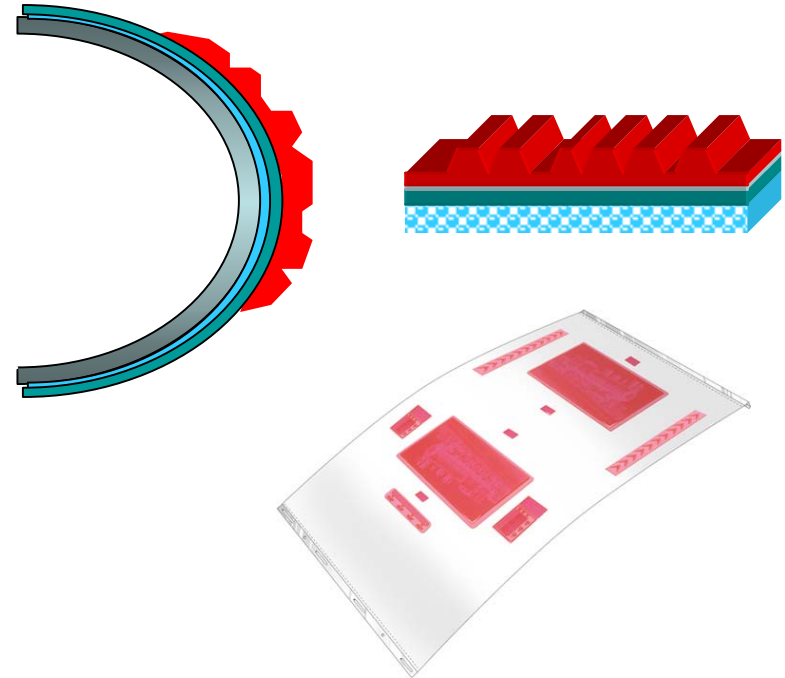
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- Review of analog platemaking
  - Sheet and liquid
- Comparison of costs of platemaking
  - Consumables, processing, waste
- What else can we do?
  - “New” technology for analog platemaking



# Review: Corrugated Platemaking

- Negative preparation
- Platemaking
  - Liquid photopolymer
  - Sheet photopolymer
- Plate mounting
  - Traditional
  - Imposition
- Proofing
- Shipping



# Basic Assumptions

- **Liquid**
  - **Cost contributors include the following components**
    - **Liquid Photopolymer Resin**
    - **Substrate**
    - **Coverfilm**
    - **Detergent**
    - **Defoamer**
    - **Developer**
    - **Waste in use**
- **Sheet**
  - **Cost contributors include the following components**
    - **Sheet Photopolymer Resin**
    - **Solvent**
    - **Waste in use**



# The Liquid Platemaking Process

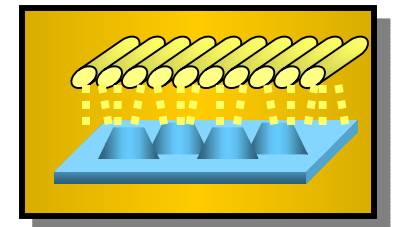
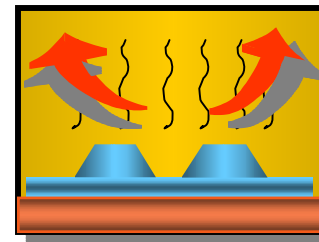
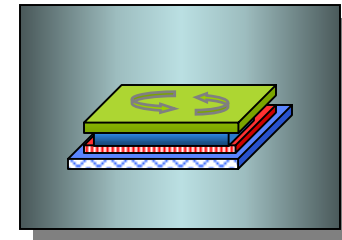
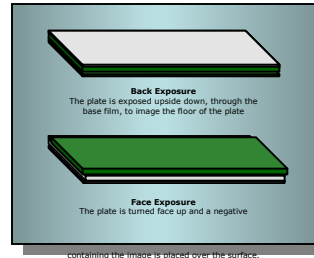
- Exposure unit
- Resin reclaim
- Washout unit
- Dry
- Post exposure
- Detack

Process Time = 1:15 - 1:30



# The Basic Steps of Sheet Polymer Platemaking

- **Back exposure**
- **Face exposure**
- **Washout**
- **Rinsing & blotting**
- **Inspection & drying**
- **Post cure & detack finish**

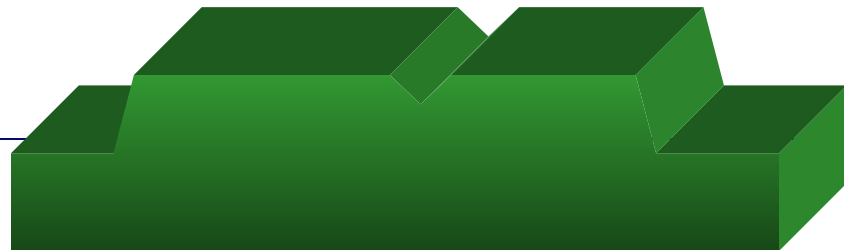


Process Time = 2:30 - 5:00 hours



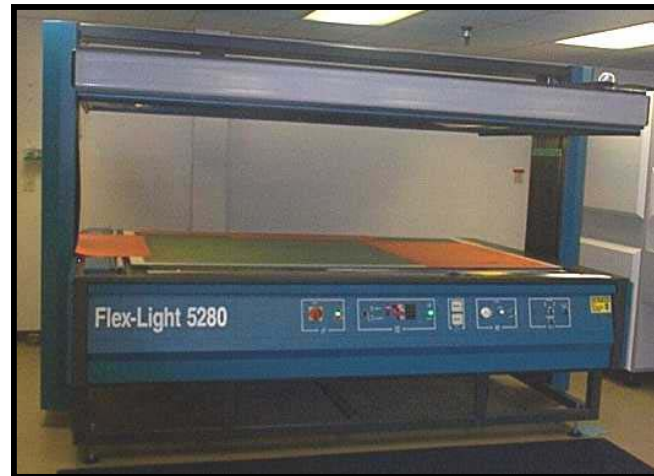
# Basic Assumptions cont.

- Typical corrugated plate has a floor equal to 50% of the total overall thickness, ie 125 floor for a 250 plate
- Copy coverage is approximately 50% of the imaged plate
- **Liquid**
  - 25% of the cast liquid photopolymer resin is available for recovery  
100% - (50% imaged floor + 50% of the remaining material)
  - Overall waste of all incoming raw materials is between 10% and 20%,  
15% is used for the analysis
- **Sheet**
  - No recovery
  - Overall waste of all incoming raw materials is between 20% and 35%,
  - 25% is used for the analysis
  - Solvent use is calculated using supplier spreadsheet



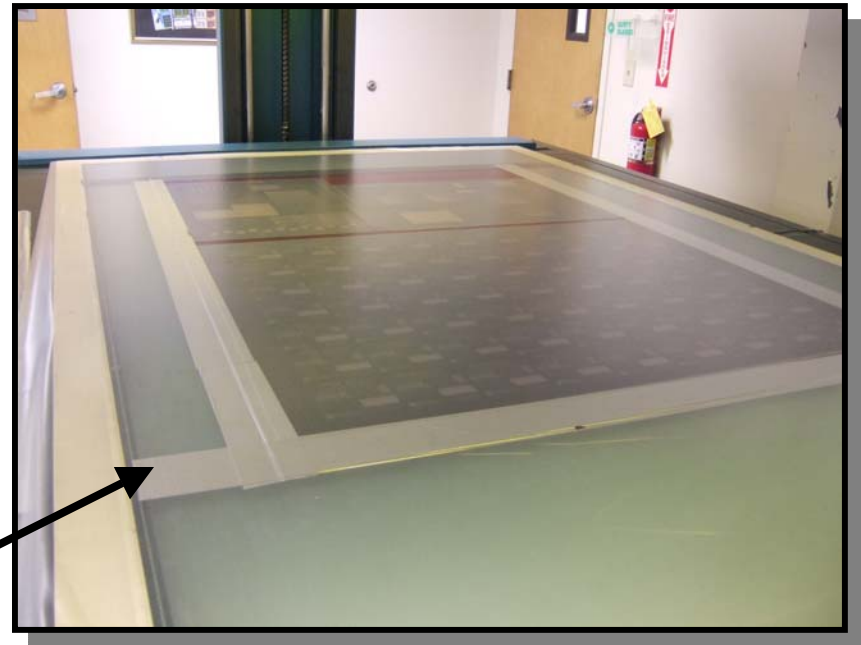
# Basic Assumptions cont.

- 1 ft<sup>2</sup> of 0.250 sheet material equals 1.27 pounds of liquid resin
- 1 ft<sup>2</sup> of 0.155 sheet material equals 0.79 pounds of liquid resin
- 1 ft<sup>2</sup> of 0.125 sheet material equals 0.63 pounds of liquid resin



# Sheet Costing Calculation

- 25% waste on average
  - Sheet cost multiplied by 1.33 to account for the 25% average waste.
- In-house distilled solvent costs
- 0.80 gallon of solvent is used to process 1 square foot of 250 material to a relief of 125



Bleeder strips cause waste





# Plate Costing Comparison (Unit Cost)

Sheet Photopolymer 250	1.00
Liquid Photopolymer 250	.62 (38%)
Liquid Photopolymer 155	.44 (56%)





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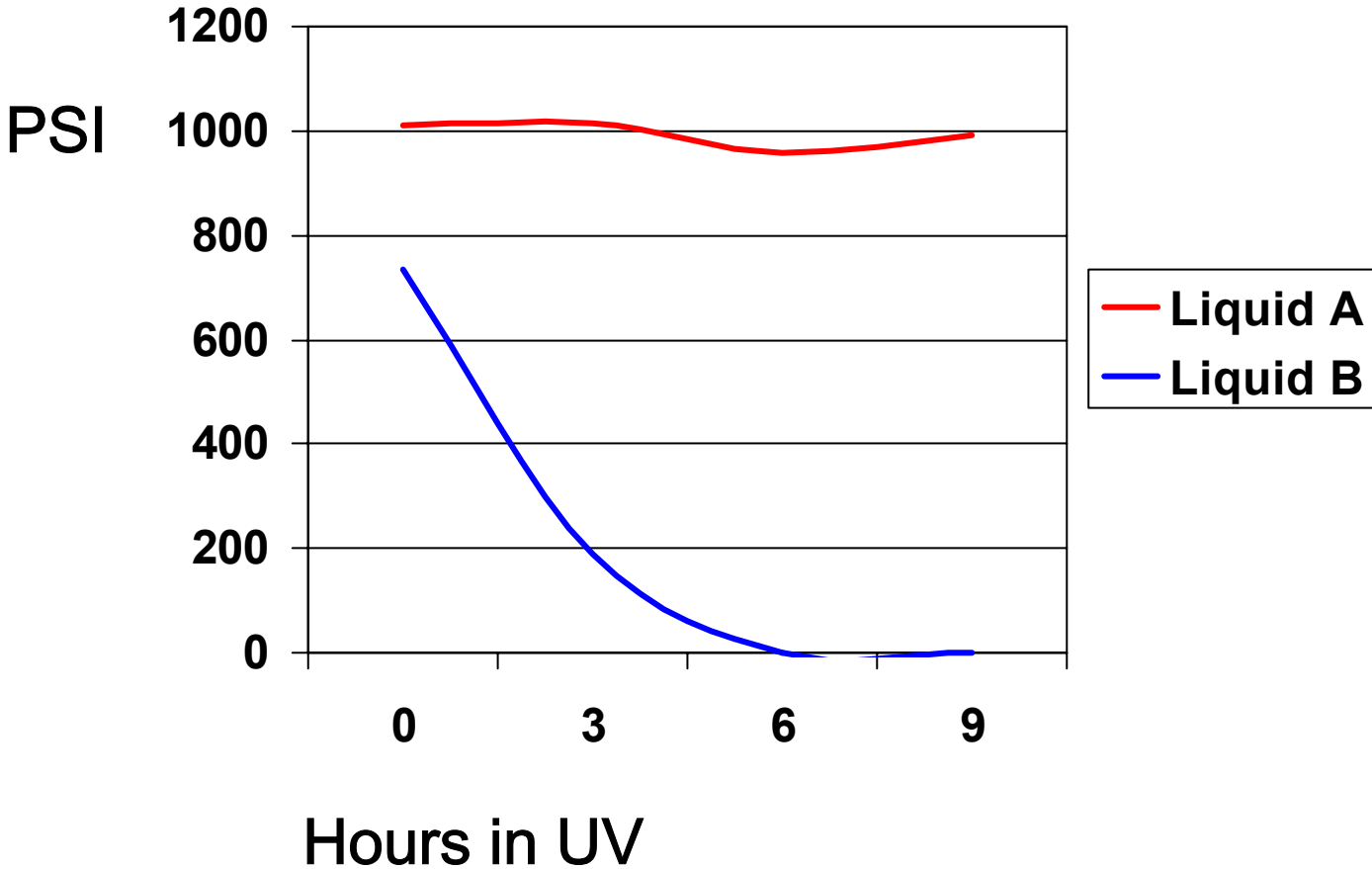


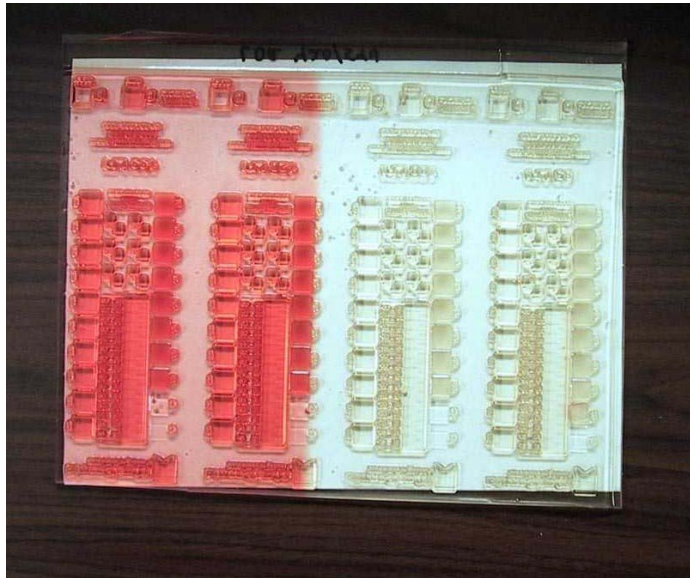


YES WE CAN



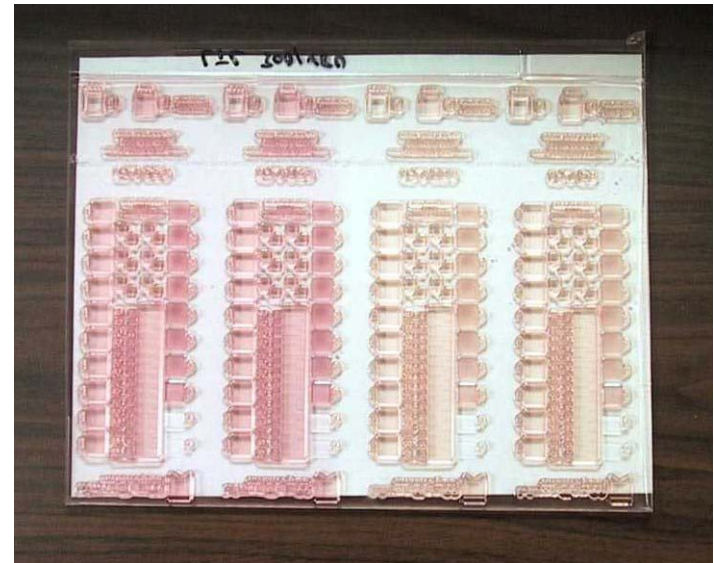
# Plate Durability



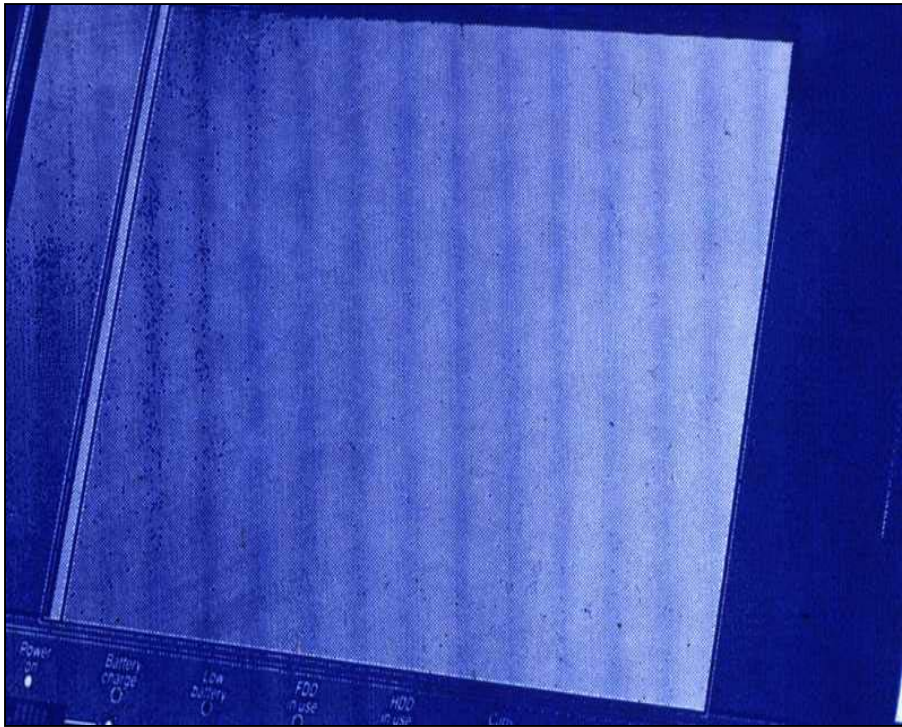


After one day in UV Liquid B

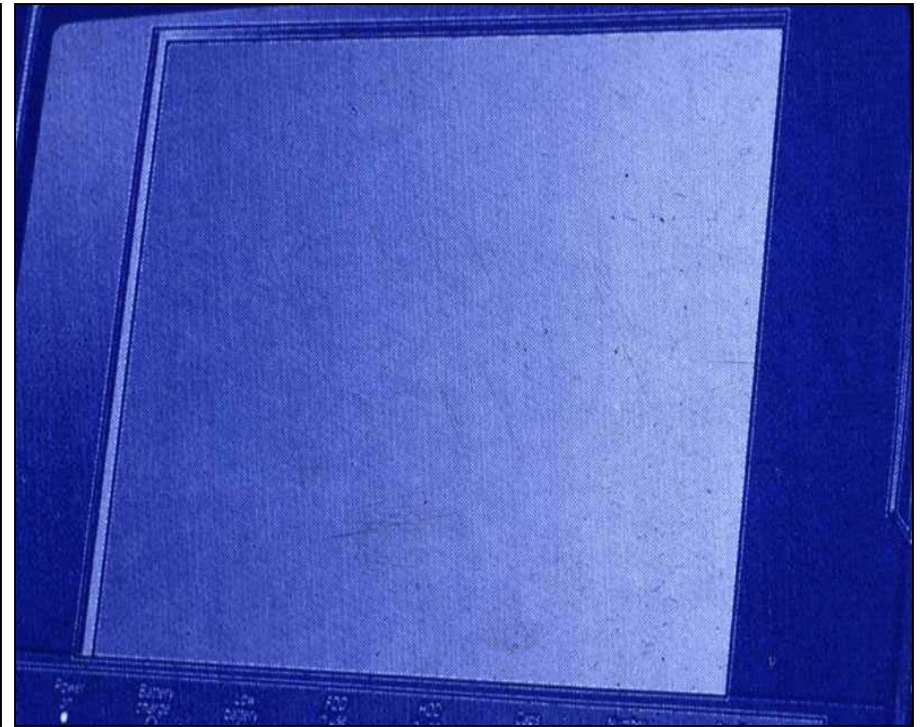
After one day in UV Liquid A



# Capped Plates



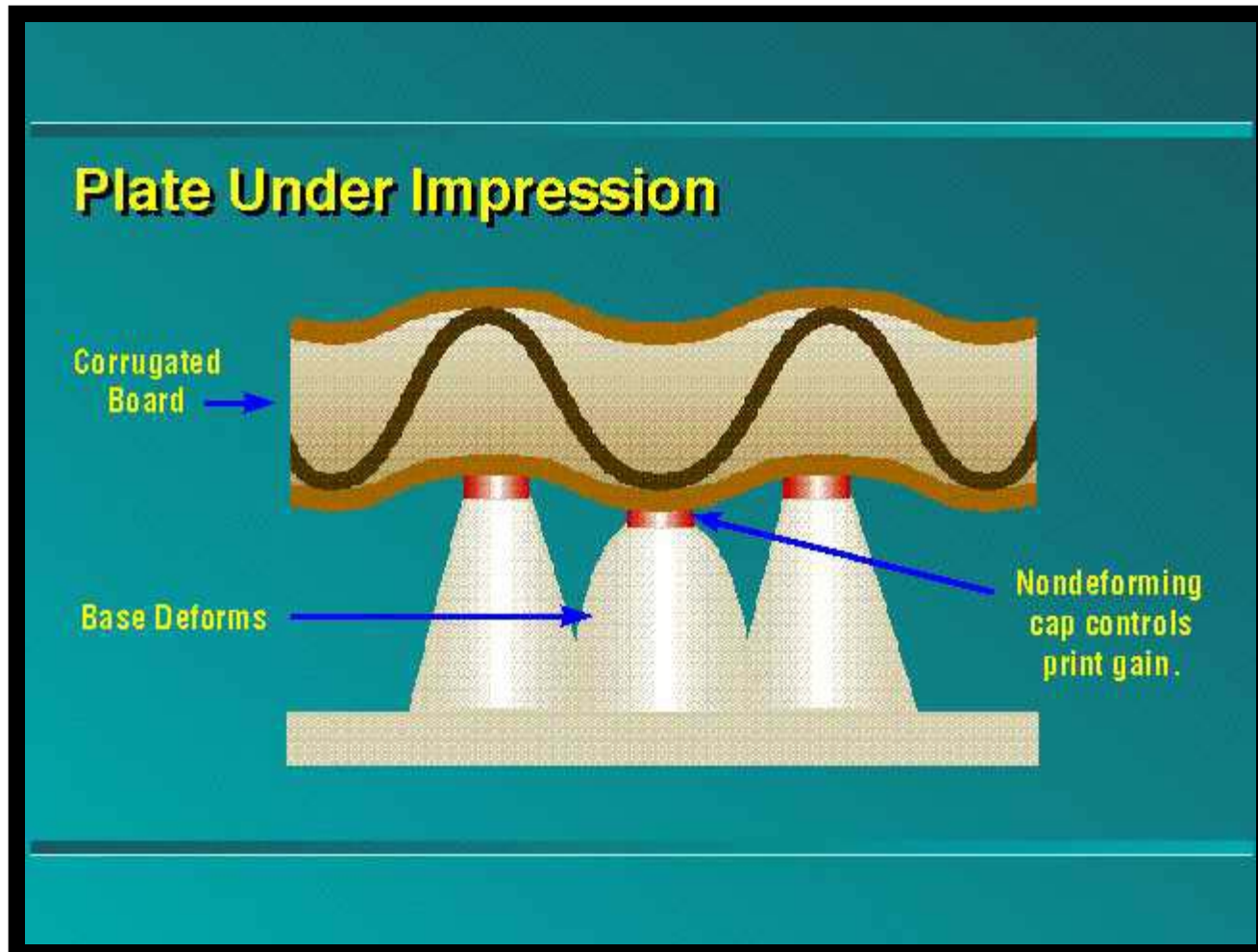
**Uncapped = Fluting in print**



**Capped = Less fluting in print**



# Capped Plate



# Capping



Uncapped



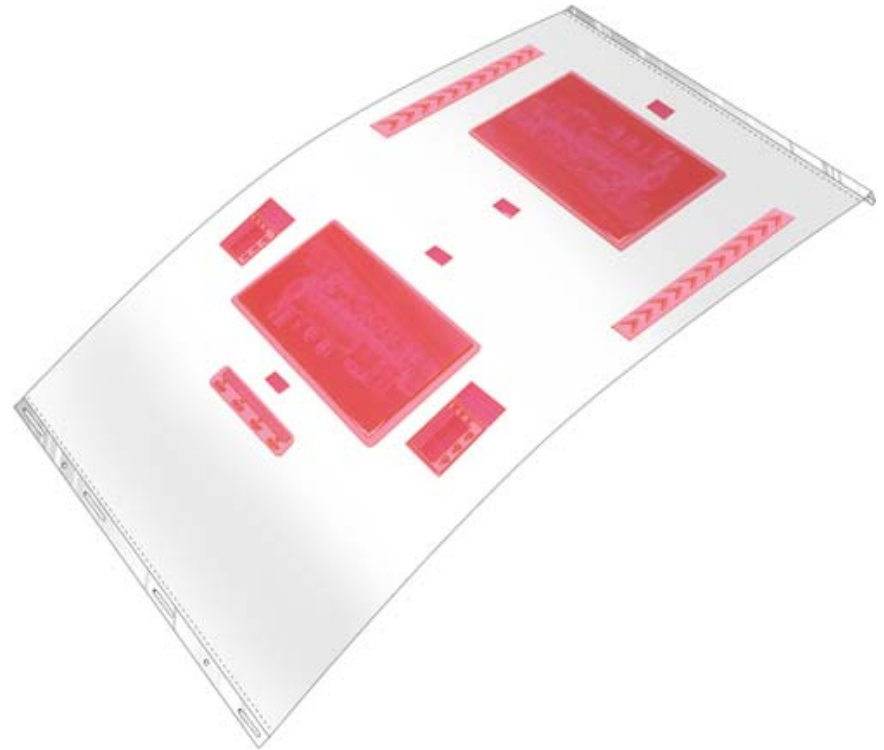
Capped



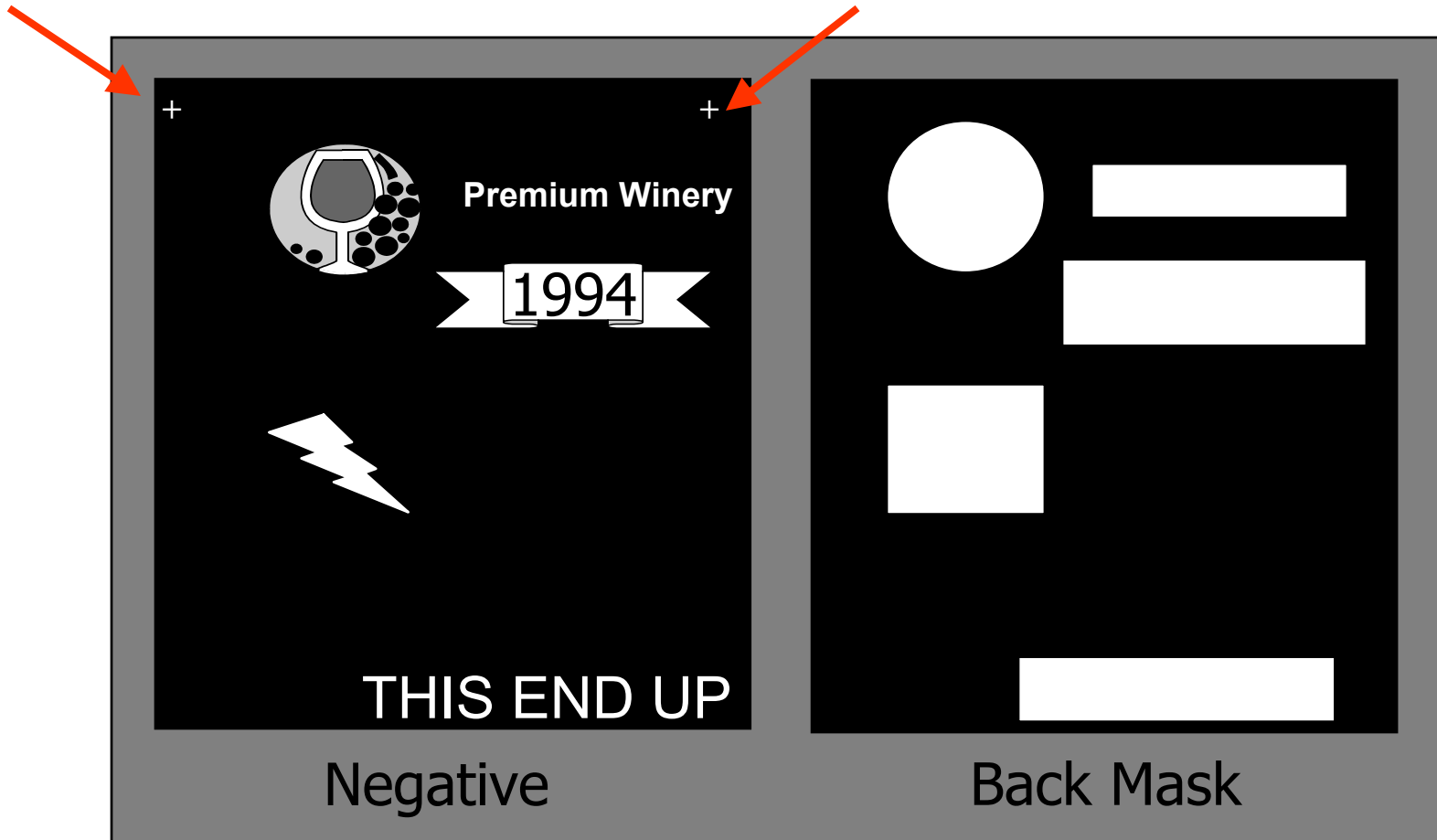


# Imposition Plate System

- Benefits
  - Image retention/fidelity
  - Registration accuracy
  - Tolerance control
  - Light weight mount rolls up for storage
  - All corrugated thicknesses available
  - Cost effective



Special targets are added to film to represent printer's setback



# Imposition Platemaking Process



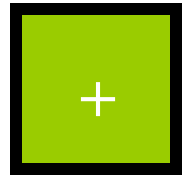
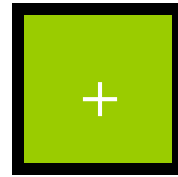
Plate is exposed, reclaimed, and processed as normal



# The Imposition Plate

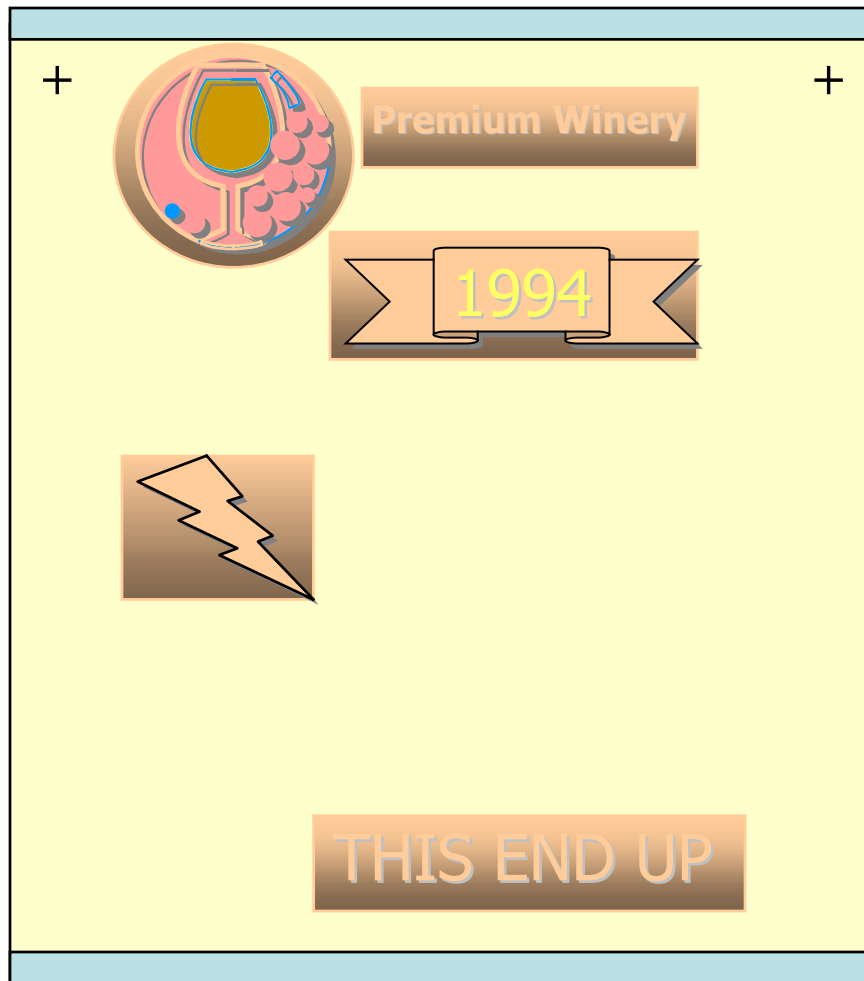
Plate is mounted on a flat table equipped with video registration cameras.

Targets are lined up, and polyester backing is trimmed square.



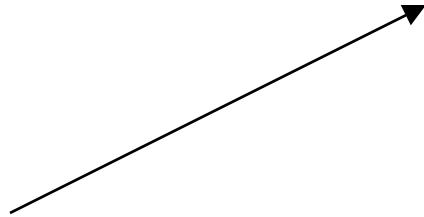
# The Imposition Plate

Lock Up Strips are  
sewn on in register for color-to-  
color plate accuracy

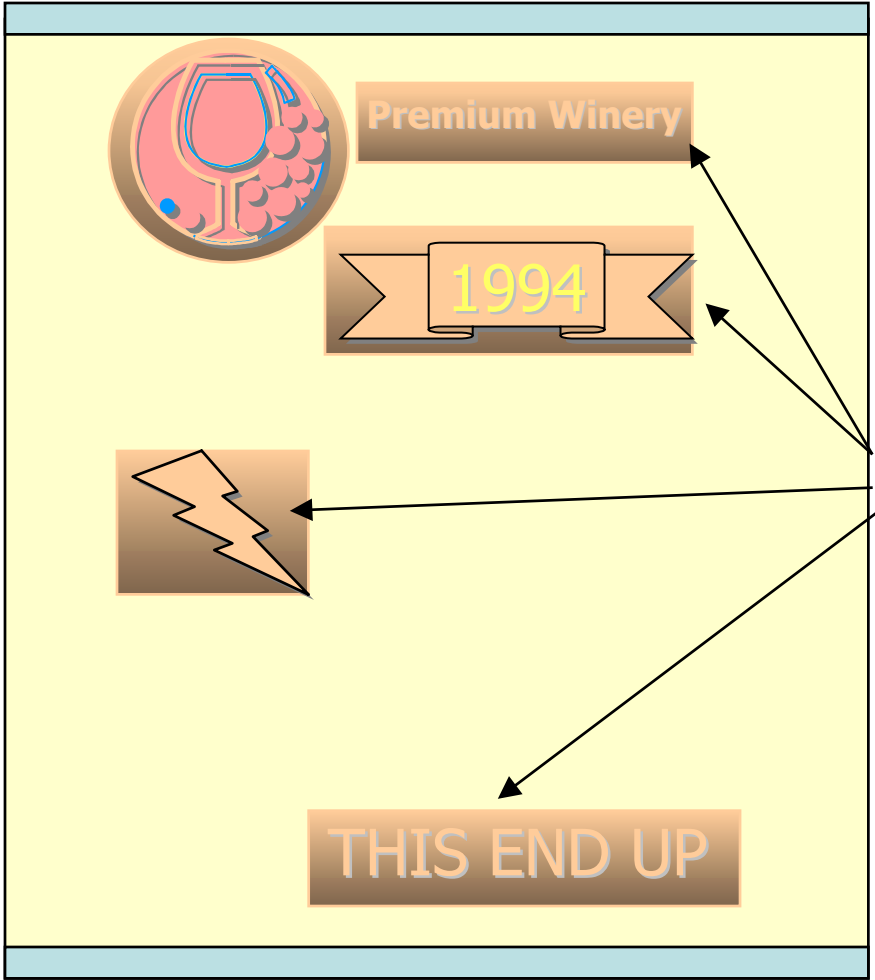


# The Imposition Plate

Register marks are removed from the plate



# The Imposition Plate

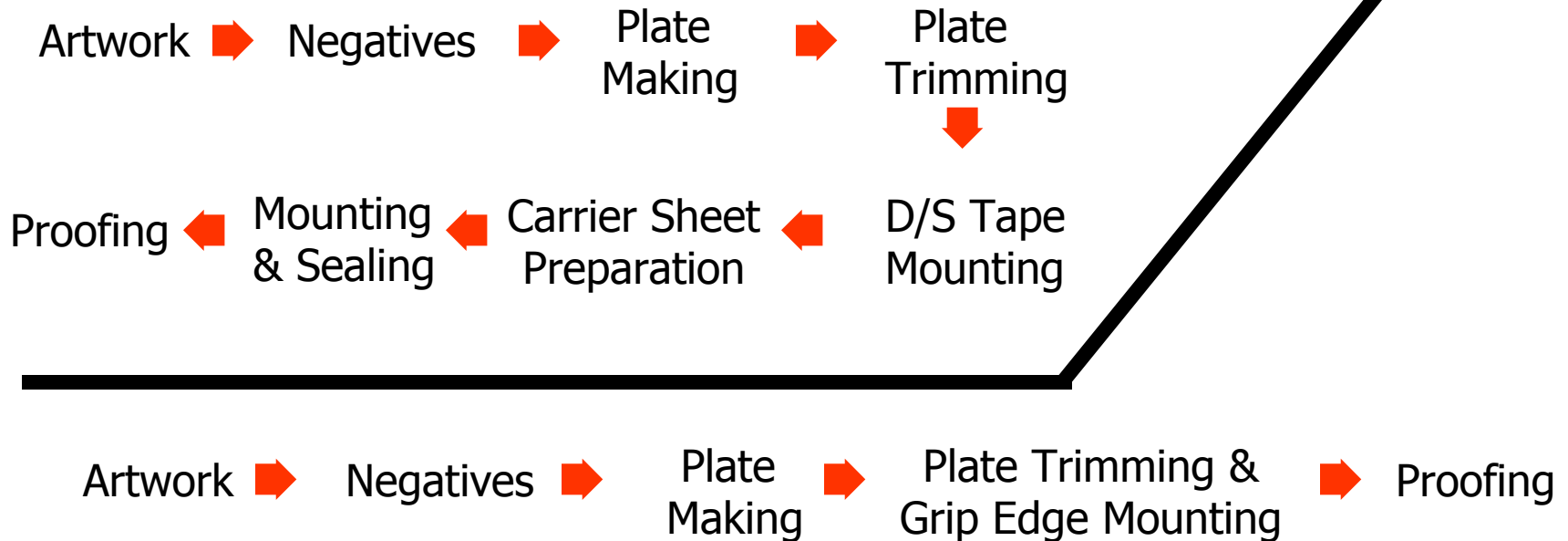


Finished plate results in photopolymer only where image is, in perfect register.



# Imposition Platemaking Work Flow

## *Artwork to Press - Using Conventional Platemaking Method*



## *Artwork to Press - Using Imposition Style Platemaking*





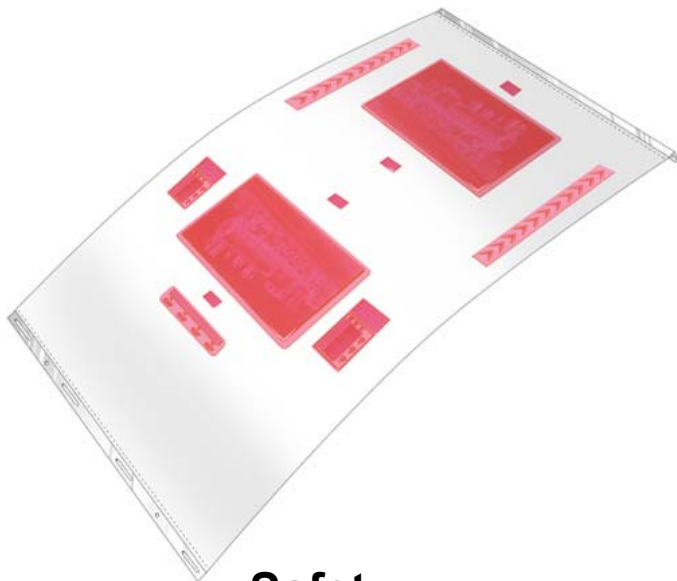
# Imposition Platemaking System

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- Economics
  - Photopolymer in image area only: reclaim!
  - One piece plates, no mounting required
  - No need for adhesives, edge sealers, PVC mounting material
  - Mounting time savings
  - “Modified” plates for slugging concerns



# The Imposition Plate



## **Safety:**

Plate weight reduced by ~ 70% (full one piece plate)

## **Cost Savings:**

Higher level of reclaim  
Lighter weight plates, less shipping costs

## **Sustainability**

Soap/water wash, no solvents



- Turn around
  - Profitability
  - Quality of image carrier
- 
- What meets your customer demand?



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# Thank You

