Gravure Opportunities

Rod Sosa

RIT University Gallery, October 28, 2014
Flexible Packaging
GOGLIO S.p.A. Daverio (VA-I)
GOGLIO COFIBOX S.p.A. Cadorago (CO-I)
GOGLIO NORTH EUROPE B.V. Zaandam (NL)

Packaging Lines
GOGLIO S.p.A. Zeccone (PV-I)

Valves, Spouts, Plastic Accessories
GOGLIO S.p.A. Milan (I)

Sales and Technical Assistance
GOGLIO FRANCE S.A.S. Paris (F)
FRES-CO SYSTEM INTERNATIONAL B.V. Zaandam (NL)
FRES-CO SYSTEM ESPANA S.A.U. Barcelona (E)
FRES-CO SYSTEM POLAND Sp.Zo.o. Krakow (PL)

Flexible Packaging
GOGLIO (TIANJIN) PACKAGING Co.Ltd. Tianjin (CN)

Sales and Technical Assistance
FRES-CO PACKAGING SYSTEM (TIANJIN) Co.Ltd Tianjin (CN)

Flexible Packaging, Sales and Technical Assistance
FRES-CO SYSTEM JAPAN Inc. Tokyo (JP)
Fres-co System USA, Inc. is a privately owned packaging manufacturing company incorporated in 1978.

We have been the innovative leader of flexible packaging systems supplying packaging machines, packaging materials and degassing valves for more than 30 years.
Company Overview

Fres-co System USA, Inc. operates two manufacturing facilities employing approximately 400 people

Headquarters and Manufacturing Facility
Telford, Pennsylvania

Manufacturing Facility
Red Oak, Iowa
Markets

- Coffee
- Liquid Food & Beverage
- Pet Food
- Specialty
Our Offerings

- Technology & Innovation
- Packaging Materials
- Dispensing Fitments & Valves
- Packaging Machines
- System Service
Packaging Materials

Manufacturing Capabilities

- High-barrier packaging materials
- Rotogravure and flexographic printing
- 3 and 4-ply material structures
- Custom lamination and coating
- Proprietary Matte Finish® Select
- Patented Pattern & Over All Easy-Open
Packaging Materials

Film Extrusion  Printing & Laminating  Slitting
Packaging Materials

Pouch-making

Different sizes, shapes and styles
- Gusseted
- Square bottom
- Corner Seal
- Stand-up Pouch
- Flat Pouch
- 3-side sealed
- 4-side sealed

Material Structures for all processes
- Low-acid Aseptic
- High-acid Aseptic
- ESL
- Hot Fill
- Retort
- Ultra Clean
- Ambient
- IQF
Packaging Materials

Dispensing Fitments & Valves

Degassing Valve  Dosing Tap  Fitment Attachment  Dispensing Tap
Packaging Equipment

Fres-co offers a full line of semi and fully automatic flexible packaging systems

- Systems for dry and liquid products; low-acid and high-acid aseptic, hot-fill and retort
- Continuous motion Vertical Form Fill and Seal
- Multi-lane stick pack and sachet machines
- More than 1700 installations worldwide
Investing in Technology
Investing in Technology
Investing in Technology
Gravure

- USA: 5 presses
- 2 ink rooms (150k lbs.)
- ~50M miles/year
- In-line and off-line
- ~8000 cylinder bases
- GAA Operator certification
<table>
<thead>
<tr>
<th>Graphics Overview</th>
<th>Metrics</th>
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<tbody>
<tr>
<td>Staff (Graphics + ink)</td>
<td>8</td>
</tr>
<tr>
<td># of jobs / year</td>
<td>~600</td>
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<tr>
<td>Average cycle time / design</td>
<td>5 weeks/3 weeks</td>
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<tr>
<td>From artwork to engraving</td>
<td></td>
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<tr>
<td>First Time Through (FTT)</td>
<td>98%</td>
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</tbody>
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Process Workflow

Receipt of Art
- Preflight
- Trapping

Approval
- Proofing
- Color Correction

Engraving
- Press Run
From academia to industry...
How can students get involved?

- Innovation
  - Cylinder engraving
  - Cylinder cost
- Automation towards Asian and European technology
  - Asian = technology
  - European = high labor wage
- Winning the market means
  - Faster, better, cheaper
- Advertisement wins “FMOT”
  - High performance packages/interaction
How can you (student) get involved?

- Color Management and proofing directly from digital to production press
- Solvent based inks still print better than water based inks
- RFID inks
- Retort packaging
- High coating barriers to eliminate foils?
- Coating versus chroming
Color Management
How can students get involved?

- Six Sigma methodology in relation to engraving, plating, and print defects, or color.
- Lean Manufacturing or Lean Sigma?
Summary:

- Start now
- Get practical experience
- Research now, build portfolio
- Network with the industry via GAA/GEF
- Opportunities in gravure are endless
Questions?

Thank You