



GAMSE LITHOGRAPHING COMPANY, INC.

**QUALITY
ASSURANCE**

QUALITY MISSION STATEMENT

The goal of Gamse Lithographing Company, Inc. is to exceed our customer's needs by continuously improving the quality of our goods and services, while always producing safe and legal products. To accomplish this goal, we will create an environment that promotes participation and commitment to our extended quality process. As a result, we will increase our competitive position in the marketplace, ensure our existence in the future, and provide stable employment.

Assurance: The act of giving confidence, the state of being certain or the act of making certain.

Quality Assurance: The planned and systematic activities implemented in a quality system so that quality requirements for a product or service will be fulfilled.

Quality Assurance

The following information serves as an outline that details our program:

- Quality procedures structured around the GFSI certified schemes
- Quality assurance programs designed to promote process evolution
- Color management procedures
- Departmental quality procedures at every step of manufacturing
- Job Planning / Preflight of incoming materials
- Sign-offs at each stage of production
- Bar code scanning and testing in prepress and at presses
- Weekly supervisors quality control meetings to monitor quality procedures and company performance
- Customer-specific standard operating procedures available to meet individual customer requirements
- Thorough inspection of each job before it is shipped, comparing the final product to the signed-off approval sheets
- Continuity sheets pulled and checked based on run length
- Testing/measuring equipment is calibrated on a regular schedule
- Scheduled maintenance on all presses
- Quality assurance program, procedures and documentation provided for scheduling, pre-flighting, production, palletizing, shipping and invoicing

Company Programs

- Department managers meet weekly to review quality programs, production challenges and related opportunities for improvement
- Quality/Process Engineering Manager
- Standard Operating Procedures manual
- Quarterly Company Meetings
- Evaluations - Employee Survey, "Face to Face" Employee Feedback, and Annual Employee Reviews
- Good Catch and Bright Ideas awards presented at each company meeting
- Color Testing for all associates
- Technical Plant Assessment (TPS) and custom training

Certifications

Through the combined efforts of management, manufacturing, and quality assurance, Gamse Litho is able to become certified in many industry leading certifications.



[GMP Inspections](#) – yearly 3rd party audits conducted by AIB



[HACCP Accreditation](#) – approved in 2014



[GMI Certification](#) – approved for flexo shrink film, litho and digital



[HD Flexo Certification](#) – approved in 2013 by Esko for platemaking and flexo printing on paper and film



[Global Food Safety Initiative](#) – to be completed



[International Featured Standards PACsecure](#) – to be completed

QA Lab Testing and Equipment

Static Coefficient of Friction (COF)

- The friction between two or more surfaces that are not moving.
- The Static COF number, usually expressed in thousandths (.001), is the amount of force it takes to create movement between two surfaces.
- This is an important measurement for cut and stack labels.
- Standard Static COF numbers are generally .210 - .487.
- Coatings can be adjusted to meet most customer COF specifications.
- Testing and procedures meet the ASTM D1894 standard.

Kinetic Coefficient of Friction (COF)

- The friction between two or more surfaces that are moving.
- The Kinetic COF number, usually expressed in thousandths (.001), is the amount of force it takes to keep the two surfaces moving.
- This is an important measurement for shrink sleeves.
- Kinetic COF numbers are generally lower than Static COF numbers, as it takes less force to keep something moving than to start something moving.
- There is no standard range for Kinetic COF, but coatings can be adjusted to meet most customer COF specifications.
- Testing and procedures meet the ASTM D1894 standard.

Sutherland Rub Test

- Determines the abrasion resistance of printed material rubbed against another material, with a specific amount of force, for a predetermined amount of time.
- The material being rubbed against can be any material required by the customer; face of a label, back of a label, craft paper, etc.
- Testing and procedures meet the ASTM D5264 standard.

COBB Test

- Water absorptiveness (COBB value) is the mass of water absorbed in a specific time by a 1 sq. meter sample of paper under specified conditions.
- If papers absorb too much, or not enough, it could inhibit the adhesion of the glues being used to apply the label to the container.
- Testing and procedures meet the TAPPI T441 standard.

Moisture Analyzer

- Measures the moisture content of material, results displayed as a percentage of the weight.
- Papers are manufactured to a specific moisture contents, measured at 70°F and 50%RH, to keep the fibers from either absorbing more moisture or evaporate moisture.
- If the moisture content of the paper is off, the paper could have a curl, either up curl or down curl.

Gloss Meter

- An instrument which is used to measure specular reflection of a surface.
- Gloss is determined by projecting a beam of light at a fixed intensity and angle onto a surface and measuring the amount of reflected light at an equal but opposite angle.
- The industry standard angle for measuring the gloss of printed material is 60°.
- In very rare instances, other angles can be used; 20° for very high gloss and 75° for very low gloss.
- Testing and procedures meet the ASTM D523 standard.

Shrink Sleeve Steamer

- Simulates the shrink sleeve tunnel process.
- Quickly shrink sample sleeves or grid patterns.

Vision Inspection Systems

- Inspection camera systems are installed on press and finishing equipment.
- Reporting system compiles variances.

Barcode Inspection

- Inspection barcode readers are installed on press and finishing equipment.
- Handheld barcode graders are located in pre-press, pressroom and finishing.
- Compatible with 1D and 2D barcodes.

Quality Assurance Services

Certificate of Conformance (COC)

- A document certified by a competent authority that the supplied good or service meets the required customer specifications.
- Also called Certificate of Compliance and Certificate of Conformity.
- COC's may have data measured from sources other than the Quality Assurance lab.

Certificate of Analysis (COA)

- A document issued by Quality Assurance that confirms a good or service meets the required customer specifications with actual results obtained from testing performed.
- COA's will only have data that is either measured by the Quality Assurance lab or measured by a certified source.

Traceability

- Ability to verify the history, location, or application of an item by means of documented recorded identification.
- All substrates and work-in-process materials are bar coded and scanned in/out of every manufacturing process.
- This traceability program allows full forwards and backwards traceability; from receiving to shipping, from product shipped back to vendor of raw material.

Research and Development

- Quality department works closely with our vendors to offer our customers new substrates, inks and coatings.
- Help customers to stay ahead of the curve with new label and labeling technologies.
- On-site assistance with line start-ups.
- Sample mock ups.
- On-site support for help diagnosing label application issues.
- Customer personnel training in all aspects of label manufacturing and application.

Quality Assurance Personnel

Director of Quality Assurance

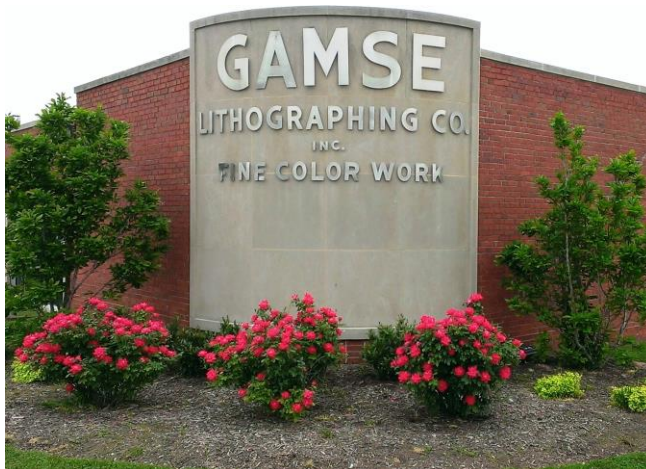
- Matt Haynes mhaynes@gamse.com
- Works directly with customers, other members of management, sales and manufacturing operators, to establish product specifications.
- Works directly with suppliers, other members of management, sales and manufacturing operators, to establish raw material specifications.
- Has technical and practical experience in most aspects of print manufacturing.
- Six Sigma Green Belt

Lead Quality Engineer

- On-site customer support for technical and label application issues.
- Trained by leading label application manufacturers.
- Works with suppliers, and brings them to the customer's site, to help with line start-ups and trouble-shooting.
- Monitors and maintains the company's temperature and humidity controlled environment.

Lead Quality Auditor

- Maintains all the company's audits
 - Internal
 - External
 - Employee Safety
 - Food Safety
 - Environmental
- First contact for customer complaints
- Maintains the company's Quality Manual and master document list of SOP's.



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