



— 2ND ANNUAL —

**SAFETY**

**BEST PRACTICES**

# INTRODUCTORY LETTER

Dear Manufacturing Professionals,

The book you are currently viewing contains new and innovative ideas to inspire your team! This year's Safety Best Practices Book is the largest compilation of safety initiatives implemented by manufacturers across the country that we have published yet.

In late spring, manufacturing companies from the Manufacturers Association for Plastics Processors (MAPP) and the Association for Rubber Products Manufactures (ARPM) were asked the following question:

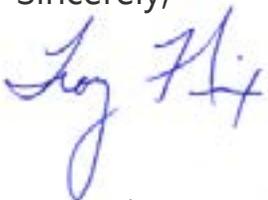
What initiatives has your company implemented in the last twelve months to make your organization a safer workplace?

From this, manufacturers submitted best practices and new initiatives in regard to their company's safety program. These ideas and programs have made each company a safer environments, empowered employees and reduced workplace accidents. By offering to share their best practices, these companies reveal their dedication and commitment to continuous improvement in the safety!

It is the belief of MAPP and ARPM that sharing and recognizing best practices allow all companies more opportunity for improvement. It is our hope that you share this book with your team and use it as a benchmarking tool to effect positive change within your own organization.

Thank you to those who participated and shared in this opportunity!

Sincerely,

A handwritten signature in blue ink that reads "Troy Nix". The signature is written in a cursive, flowing style.

Troy Nix  
Executive Director

# AUTOMATION PLASTICS

## Description of Best Practice

Implementation of cultural change by enhancing physical appearance of the facility, improving and standardizing systems and procedures. Upgrading older equipment on production floor, new Chiller system, adding new presses & lathe, installing security cameras, moving Maintenance Department to a dedicated location, walls were painted throughout the building, new decor in offices & new signage installed outside.

## Realized Results

Due to incremental goal achievement, culture change happened. Personnel on all levels are involved with sharing ideas for improvement, cleaning up spills, putting away tools & equipment. People are seeing safety issues easier and reporting them sooner to management. We are also noticing safety issues fixed within a short time of reporting. It's easier to work in a clean, bright environment. We are tracking a downward trend with Incidents & Accidents with zero slips or falls at the same level this year. There is more pride and positive behavior which has helped us to become a better and safer organization.

## Introduction

In early 2018, Automation's senior leadership determined to embark on an organization-wide transformation program. The aims of the initiative were two-fold:

1. To enhance the physical appearance of the facility
2. To achieve world class excellence in every functional aspect of our manufacturing operation as the first step toward IATF 16949 registration

The rationale for this mandate originated with Automation's new Vice President of Sales and Marketing, Jeff Ignatowski. Jeff, who has a track record of implementing corporate cultural change, recognized significant growth potential at Automation, but insisted that physical transformation was a critical prerequisite.



*Automation Plastics Molding Department before Transformation*

## Employee Response

Response to this initiative was mixed. In general, a "wait and see" mindset prevailed.

However, many expressed the view that meaningful transformation is about a lot more than just changing the color scheme.

## Facility Transformation

A great deal of effort was focused on improving and standardizing systems and procedures, but the face of the initiative was Facility transformation, which was addressed on multiple fronts:

- Equipment was upgraded and standardized, including replacement of Injection Molding presses with new models, the addition of a 4th Okuma lathe, a new Chiller system, and replacement of all existing molding temperature controllers.
- Walls were painted throughout the facility, offices and meeting areas redecorated; new signage installed outside.
- Security Cameras were installed throughout the facility.
- The Maintenance Department was transformed from a visually unfriendly assemblage front and center on the Production floor to a dedicated brand new fabricated room in the Warehouse Area.



*Automation Plastics Molding Department - May 2019*

Unsurprisingly, the most visible transformation was the painting of the floors in production areas. This was done in stages, starting with a small upstairs Press Room. When this first stage was completed in August of 2018, it occurred to the Safety Team that our historically high incident rate in the “Slips and Falls” world might be reduced. Over the years we had struggled with resin, water, oil, and glycol spills on the unfinished concrete. We reasoned that the grit in the newly painted floors might result in a higher coefficient of friction than for a concrete floor somewhat saturated with 40 years accumulation of liquids and “crud”. We arranged for Ohio BWC to compare the new and old floors with their slip meter.

Unfortunately, we found that the slip rating for the newly painted floor was about the same as for the unpainted floors. Static Coefficient of Friction ratings for the new floors was 0.65- 0.72 (higher is better). While this is a good rating, the numbers came back even better for the original floor surfaces: 4 different locations in the Molding and Warehouse/Shipping Departments yielded Coefficient ratings of .60 to .97, with the highest ratings in the areas we had identified as the most hazardous. But, being lifelong Cleveland sports fans, we hunkered down, and held fast to the hope for better days ahead. Besides, the new floor looked great, just like a new stadium.



## Domino Effect

As floor paint gradually expanded its footprint, the need to protect it from damage became increasingly evident. Managing the care of the new floor took on a life of its own; as soon as one floor preservation strategy was identified and implemented, another issue would rear its ugly head and demand a solution. This was the Domino Effect, and it took a while to get ahead of it.

### Slips & Falls

Year & Month	Location	Source of Injury	Cause	Action
2018, January	Shipping Dock	Environmental Conditions	Ice	Added Grippy Mats to Entrances
2018, September	Entrance / Walkway	Floors, walkways, ground surfaces	Water	

NEW

#### Old Entrance Mats Grippy Mat at Entrances & Doorways



**Domino 1: Wooden Pallets** -- They tended to scratch the floor, especially when kicked or pushed across the floor.

Solution: Plastic skids under every wooden skid

**Domino 2: Caster Wheels** – Old, beat up caster wheels damaged the floor

Solution: New caster wheels, not just on auxiliary equipment, but also on forklifts, pallet jacks, etc.

**Domino 3: Traffic – Pedestrian Traffic**, especially at facility entrances, Material Barrels, Table legs, etc., all tended to beat up the paint

Solution: We discovered Grippy Mats from New Pig, which is a story in itself; the use of adhesive Grippy Mats has transformed the effectiveness of floor mats throughout the organization.

**Domino 4: Discipline – Old behaviors no longer “cut the mustard”** -- new behaviors were needed to sustain the gain.

Solutions:

**“New Floor Sustainability,”** a comprehensive Dozuki Training Guide with embedded competence evaluation functionality, was developed, and all personnel were required to complete the new training element.

**A program called “Single Point of Accountability” (SPA),** developed by Bob Miller, one of our Production Managers, was implemented across the entire organization. This program is essentially a methodology for implementing the principles of 5S (7S at Automation, with the enhancements of Safety and Spirit), but requires engagement by each individual. Personal responsibility, discipline, and accountability is the cornerstone of this innovative application of 5S.

#### G.1030.02 New Floor Sustainability

Written By: [Name]



#### Step 7 – Accountability – Personal Making



- The SPA assignment enables taking to others.
- Independent evaluation by users of the area should be encouraged by the SPA.
- In the event personnel do not respond to expectations of the area, SPA area will be removed, encouraging approach.
- SPA should communicate meeting completion at the changeover with the understanding that SPA area changeover are to be addressed for the SPA areas.

#### Step 8 – Accountability – Collective Action



- The SPA assignment offers to make consistent progress to the SPA.
- All individuals using the SPA have their shared responsibility for improving and maintaining the SPA.

## Something Funny Happened...

And then we noticed something funny. It dawned on us that we were gradually starting to live in a new reality. A reality where people were starting to take pride in, and ownership over, the new look.

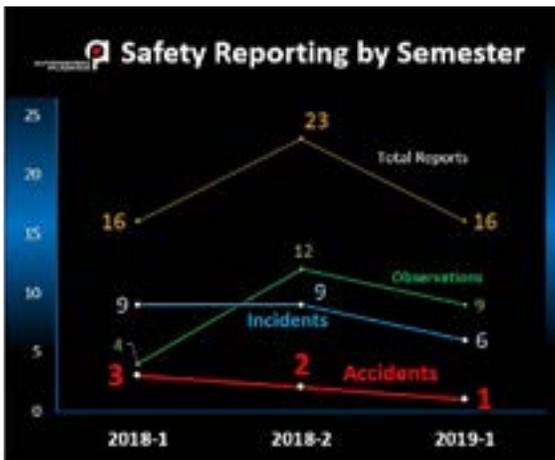
- Day after day, we noticed an absence of resin, parts, water, oil, glycol, and the like on our new floors.
- People, even supervisors and managers, were observed sweeping and cleaning up after themselves.
- People made positive suggestions
- Floor personnel requested Grippy Mats for their areas
- Self-reporting of near misses and incidents increased.

In short, culture change seemed to just happen.

## Number and Statistics

In reality, it didn't "just happen." It actually resulted from lots of effort, leadership, vision, persistence and investment.

We acknowledge that change is incremental, and that many opportunities for improvement remain. We still struggle in areas. We have not yet achieved our objectives, and progress can be elusive. But we are seeing improvement.



### 6-Month Safety Performance

We continue to experience high reporting of safety concerns (Observations), along with a downward trend in actual Incidents (First Aid) and Accidents. We have been intentional about consistently encouraging personnel to report Safety Incidents and Observations, no matter how small.

### Falls on Same Level

Another very encouraging trend appears in the "Slips and Falls" numbers. After a rash of such incidents (7, including 3 recordable accidents) in the previous 2 years, most of which were closely related to the care and condition of the old floor, we have experienced no such events in 2019.

### Slips & Falls

Year & Month	Location	Source of Injury	Event	Action
2018, March	Fresh 2B	Floors, wall panels, protruding cables	Slip/Fall	Painted floors, new elevators & roller supports
2018, March	Fresh 12A	Floors, wall panels, protruding cables	Slip/Fall	

Glycol on floor



## 7S Audits

The SPA program includes a weekly 7S audit of all SPA areas and personal spaces. Audit scores are published, and we are seeing a general trend of improvement, even in offices and among management personnel!



The transformation has helped encourage accountability, since we are all responsible for a personal SPA area (Single Point of Accountability). It is important that we maintain and keep up a certain level of quality standard at all times. In general people tend to be happier and more positive with new and improved things, and the same goes for us employees and our new work environment. We come to work each day and work in a culture that generally is brighter, and that has ultimately led to a more productive work environment, with the goal of attracting more business and success throughout our company."

- Sarae Chaney, APC Quality Inspector, 24 May 2019

"We had our annual fire inspection yesterday and it went perfect! The fire inspector found no issues and was very impressed with everything we are doing here at APC. He made the comment that we're one of the most organized facilities in Aurora. He was also very impressed with all of our monthly inspections and all the tracking we are doing on these inspections."

- Chris Miller, APC Plant Engineering Manager, 30 May 2019



### **Automation Plastics Video: Linking Safety Culture and Facility Transformation**

The video that accompanies this MAPP submission provides additional insight into the transformation that we have experienced.

Access the video here: <https://youtu.be/7D0yaH5lO-c>

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