

# Quality as a Mindset

## Not Just a Buzzword

*Documenting procedural best practices isn't enough to consistently produce high quality products. Rotational molders need to instill a desire to manufacture to high quality standards.*

Nothing sparks thoughts about quality like sitting in a plane that's about to take off. "I hope this pilot went through some intense, high quality training" -- "I hope this plane was designed with the finest quality systems and components available" -- "I hope the maintenance program conforms to the same high quality standards we use in our plants," I thought to myself while awaiting my departure. And as a pilot, I could not help but recall what happened the first time I bought my own airplane. It was delivered from the factory with a standard airworthiness certificate documenting having been manufactured properly and was therefore safe to fly. And fly I did. Everywhere I could. Except I was blissfully unaware the Federal Aviation Administration (FAA) was soon mailing me my first Airworthiness Directive (A.D.), a letter suggesting I immediately upgrade my plane with stall strips on the wings to prevent the plane from falling into an "unrecoverable spin with subsequent crash." After paying for the remedial repairs and returning to the skies, I received three more A.D. notices from the FAA over the next 20 months alerting me to one problem after another. First, the motor needed new pushrods to prevent the engine from stopping in mid-air (followed by a "forced landing"). Then the engine magnetos needed to be replaced also to prevent the engine from stopping in mid-air. Then the tail mounting brackets had to be replaced to prevent the tail from falling off in mid-air with similar consequences. My shiny, new plane may have been manufactured according to its design specifications but the design hardly seemed to be a quality design. Just because it would fly did not make it a quality product. The fact that these



▲ 72E: This MOD 72E laundry cart is the result of a collaborative effort among the sales, design and manufacturing teams to devise a new concept for handling laundry that takes advantage of previously.

► **Leonardo Being Assembled:** This automated Leonardo rotational molding system being assembled in Meese Orbitron Dunne Co.'s Madison, Indiana plant promises to promote high quality production and part to part consistency.

design flaws were only uncovered after investigating fatal crashes cemented in my mind forever the importance of establishing high quality as a mindset at every level of a company.

Manufacturing a plastic container may not seem like it involves the same grisly life and death consequences as manufacturing an airplane does but if that container fails while loaded atop a forklift the results may be just as deadly. While the vast majority of rotational molders – and that certainly includes those of you who invest time in reading publications like RotoWorld® – pay close attention to the quality of every facet of operations, there are some who run their day to day operations much like the company that manufactured my problem-plagued airplane. Unfortunately, they do so without concern for how their approach affects the perception of the entire rotational molding industry.

### Industry Sentiment

There is no way to know exactly how some design engineers latched onto the idea that rotational molding is intrinsically unable to meet precise tolerances. Maybe they were comparing it to more familiar processes like metalworking or injection molding without truly understanding how the processes differ. Or perhaps a few rotational molders convinced some engineering and purchasing managers to stake their jobs on trying out rotational molding, then failed to deliver the level of service, manufacturing and support they had promised, sending them running back to their other vendors – for good. In fact, the quality of any process corresponds directly to the commitment of the people behind the process. Like the computer age axiom, garbage in - garbage out, rotational molders who put quality into the process get quality out and those who choose not to put quality in get inferior parts out. The future of rotational molding depends on how OEM's perceive the process and if even a few bad apples continue to dismiss high quality standards as an imperative then not only will their businesses fail to excel in the long term but our customer



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base as an industry will contract along with the range of products and parts that OEM's consider suitable for rotational molding.

### Plants Do Shut Down

I've seen firsthand that plants do close down and while there may be many factors leading up to a plant closure, rarely is it shut down due to the quality being too high. More often, a closure is triggered when people fail to care about quality and how it impacts the customer. A man sitting next to me on a flight a few years ago, for example, had just been laid off when his global automotive company shut down his plant. The company had been enjoying a resurgence thanks to the launch of an economy car and the plant was humming along. To cut costs, managers decided to source components from several different countries and assemble the cars in another country. When the cars started rolling off the assembly line, their horns honked when the button to open the windows was pushed and the doors locked and unlocked when the light switch was turned on and off. Quality inspectors soon figured out the prints for wiring the

car were misinterpreted due to errors in translation. Problem solved, right? Not exactly. This should have been the happy ending to the story but unfortunately, according to the former manager who sat next to me, company executives decided to continue producing the cars with these known defects, shifting the burden of repair onto the dealers with no notification of the problem. Surely this wasn't the best practice documented in the company's ISO application. As word spread among the dealers and customers, the once successful car had to be discontinued and the adverse impact of this debacle on the company's brand was incalculable as the perception of poor quality drove people away from the company's other, more luxurious cars, too. Clearly, the level of commitment to quality at the assembly line corresponds directly to the level of commitment to quality at the executive level. In this case, the executives failed as role models. They demonstrated that poor quality was acceptable and even preferable. Had the company invested in promoting quality as a mindset among line workers, had thousands of binders been distributed and posters



### Mission Statement

As demonstrated by the shuttered auto plant example, commitment to quality starts at the top. The first step is for executives to put a mission statement to paper. This requires truly thinking about the strengths and weaknesses of one's company in relation to what the market is interested in buying. For an example, our goal at MOD is to exceed customer expectations as a premier rotational molder and to produce the finest quality rotationally molded parts in the industry.

### Quality Statement

Every employee needs to understand the impact of quality on the customer and on his/her own company. Hiring a quality inspector and uncovering defective parts at the end of the line is better than unknowingly shipping defective parts, but not much better. Ultimately, this thinking will cost too much for the company to stay in business. A quality statement that supports the mission statement helps focus the concept into a mindset that everyone can embrace. For an example, at MOD, each member of the team has the responsibility to conform to agreed upon customer expectations, and the right to make improvements or meet or exceed those expectations through both teamwork and individual empowerment to address quality issues through preventative action.

I feel confident in our business knowing that any one of our people can stop production to address a quality issue or present an idea to improve operations. I know our managers will listen and take action accordingly, not just because we've documented our quality procedures in a manual - though we have - but because they understand the importance and the value of quality to the customer, to our company and to the entire industry. And back to that airplane flight, if only the airline would care as much about my luggage.

If you have comments or questions, I would love to hear from you. Send comments to Bob Dunne at [rdunne1@usa.net](mailto:rdunne1@usa.net) or see [www.Rotomolding.com/bobdunne.shtml](http://www.Rotomolding.com/bobdunne.shtml). Meese Orbitron Dunne Co. is the first rotomolder in North America to invest in the Leonardo system. Its parent company, Tingué, Saddle Brook, New Jersey, has a history of bold moves since 1902 that include pioneering the use of plastics for rotomolding laundry handling products.

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hung documenting proper procedures, it no longer mattered. Whatever impact internal quality programs had made up to that point had been dashed in an instant.

As customers, we refuse to buy cars that score poorly on quality and safety data. We expect airlines to land safely every time (and with our luggage on board, too). Yet as rotational molders, some of us then turn around and deliver designs and parts to the customer that do not measure up to the same level of quality that we demand ourselves. In some cases, the customer may knowingly ask for an inferior design but it is our responsibility to dissuade that request and educate the customer. With cost increases affecting every facet of our business, this is simply no way for our industry to operate if we want to prosper over the long term. To avoid the quality issues that hurt customer satisfaction and degrade the image of rotational molding, consider taking some of these steps in your plant:

### Automate

Automated equipment when operated by trained workers with experience in rotational molding promotes consistent, part to part repeatability. CNC routers and our Leonardo rotational molding system are key examples.

### Teammate

Involve the sales team in the manufacturing process to help them understand exactly what issues the manufacturing team faces during day to day operations and what types of products are likely to create quality issues. Then involve the manufacturing team in the sales process to help them understand how much work is involved before a quote is even requested. Be sure everyone understands that a single quality issue upon delivery can nullify years of effort that had been contributed to a project or to a customer by many people.

### Vendor Relate

Establish positive relationships with material suppliers, mold makers and other vendors and involve their sales representatives early in the product development stage. Polyethylene from one supplier, for example, may be chemically identical to that of another but they may not always perform the same way once in the mold. To deliver consistent product quality, tailor the process to the material of one primary supplier and understand how adjustments may need to be made to the process in case a vendor change is necessary.