EQS
It Works!

ClosedMoldAlliance
Composites One • MVP
RTM North Technologies

Economics

Reduction in Labor Input Per Part Produced. Parts Versus Open Mold in Production Time and Labor. Average 44% Increase in Light RTM Production Parts Versus Open Mold Parts.

Quality

Over 40% Average Weight Reduction in Parts Compared To Open Mold. Near Class A Finish on B-Side of Parts. Consistent Reproducible Parts. Reduction of Rework Caused by Human Error.

Safety

At 70% or Higher Reduction In Emissions Compared to Open Mold Parts. Contact with Chemicals is Virtually Non-Existent.

Based on an on-going study by Purdue University, the Clean Manufacturing Technology Institute (CMTI) and the Coating Application Lab located at Purdue University. Figures provided July 2005. This study was done on a few parts and the statistics would not apply to all parts.

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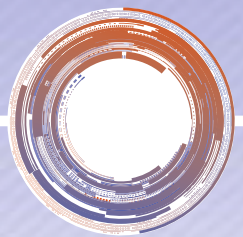
Closed Mold Technologies

COMPOSITES ONE

Economics

Closed Mold Processes Work



More permanent and stable workforce. Because workers tend to prefer cleaner working environments, workforce turnover is often dramatically lower in closed molding shops than in open molding shops.

Attracting higher caliber employees. Closed molding requires skill and is more mentally challenging than open molding, attracting those workers who thrive on such challenge.

Reduced HR costs and absenteeism. Because of the higher caliber of employees and reduced turnover, absenteeism decreases and training and HR costs are reduced.

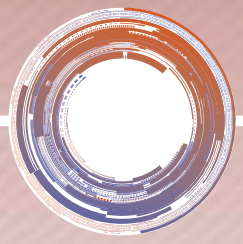
Better work environment. OSHA air quality standards are met without specific controls and housekeeping is greatly simplified. Tyvek suits and respirators are rarely required, so workers can often work comfortably.

Ease of attracting customers. When manufacturing facilities exhibit order and cleanliness, customers perceive the cleaner and more sophisticated environment as an indicator of the competency of the molder.

Consistent production part costs. Material usage with closed molding is repeatable in production leading to improved tracking of production costs.

Quality

Parts



More consistent part thickness. Part cross-sectional dimensions are largely determined by the mold, not the operator. Maintaining a specified part thickness is much easier with closed molding than with open molding.

More consistent part weight. Glass and resin usage is easier to control precisely. In closed molding the operator has little influence over the quantity of materials that goes into a part.

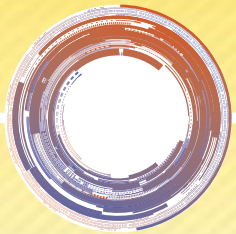
Smooth molded surface on both sides. This can provide performance benefits in many applications. Even when a molded backside finish is not functional from a performance standpoint, the part's improved appearance is often perceived as an indication of quality by the customer.

Ability to gel-coat both sides. Two gel-coated surfaces can add value to the finished LRTM part both aesthetically and functionally.

Ease of controlling glass to resin ratios. Much higher glass content is possible with certain closed molding processes than can be obtained with open molding. This can be of great importance when structural parts are being molded.

Safety

Environmentally Friendly



VOC and HAP emissions are virtually eliminated. MACT compliant resins are not needed for closed molding and reporting requirements are minimized. Equally pleasing is that neighbors will breathe easier.

Vast reduction of dangerous solvents. Ability to meet building fire codes and OSHA compliance is improved.

Reduction of waste. Because closed molding is less wasteful than open molding there is less waste to dispose of at the landfill.

The previous two benefits can contribute to a reduction in overall production costs.