



Reaction Injection Molding

Case Study: Major Bank Uses RIM Parts in Branch Re-Branding Effort

When two large regional banks merged and management decided to re-brand the 2,300 new branches, **Exothermic Molding** was chosen as a key supplier and **Reaction Injection Molding** the preferred process. The focal points of the new branches, designed by a well-known Brand Management Design Firm, was to be a large branded kiosk used for Financial Merchandising and an Express Deposit Box. The sizable displays, approximately 7 feet wide by 7 feet high, posed many design and manufacturing challenges.



Large part sizes with complex geometry are a perfect fit for the RIM process.

fabricated in just five weeks, allowing the client to quickly implement the affordable plan for RIM molded parts. **Cost efficiency** was maximized by creating single, modular molds that could be used to produce two different lengths. In addition to the **accuracy and repeatability** provided by the RIM process, RIM parts also finish extremely well. Exothermic Molding was responsible for the final painting, decal applications, mechanical assembly and packaging of all parts.

First, designers required a monolithic “solid” look with no reveal lines. The free-standing display required full 360-degree visibility, complex geometry and structural integrity. Accuracy and repeatability of the parts were also crucial. Since the unit had to ship to 2,300 branches and be assembled on site, lightweight materials were preferred. The Express Deposit Box needed to provide security of contents, support a heavy work surface and the glass and stainless steel surface. Initially, the design called for parts made from fiberglass, however, the manufacturing process proved to be inaccurate, very heavy and expensive. In addition, fiberglass production was too slow to keep up with the synchronized grand openings of 2,300 branches throughout the East Coast.

Exothermic Molding met the challenge with the **RIM** process. Low cost, “hybrid” cast aluminum molds were designed and



2,300 East Coast banks received the RIM molded Express Deposit Centers in record time.

The RIM process was selected from numerous alternatives including fiberglass and several Thermoplastic processes. Reaction Injection Molding's benefits, such as low costs, **short lead times**, the ability to produce **large parts**, outstanding part to part consistency and **excellent finishing**, proved to be the perfect combination for this program.

The benefits of reaction injection molding include:

- *Large, sculpted parts can be molded economically. Variable thickness walls within the same mold allow for greater design freedom. Wall thickness may range from .125 to 1.125 inches.*
- *Closed molds produce accurately molded and structurally strong parts.*
- *Lower tooling cost and shorter tooling lead time.*
- *A wide variety of material properties including UL94VO.*
- *Electronic components, metal parts, glass and other materials are easily encapsulated.*
- *RIM parts are lower cost than the same parts made from metal or fiberglass.*
- *Compared to fiberglass, RIM parts have improved repeatability.*
- *Composites - RIM parts can be reinforced with many materials.*

Exothermic Molding capabilities:

- **CAD Engineering Review**
- **Mold Design**
- **Mold Manufacture**
- **Mold Repair/ Modification**
- **RIM Molding**
- **Precision Painting**
- **Silk Screening**
- **Assembly**

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ISO 9001:2015 Certified

Exothermic Molding delivers large, lightweight RIM parts quickly... at competitive prices.