# Parting Shots

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## "Failing to plan" or "planning to fail?"

It's an old adage, true even in the die casting industry. Where does it start?As I have stated in previous articles, it should start with product design and development. It also continues in the quoting stage. "What?" you say! Make the sales department responsible for the success of a casting project? Why not! Some castings are much easier to sell then they are to produce. Is there a simple solution?

Success is more likely with a mutual commitment between the designer, purchaser and producer. Complex, engineered castings have forced the die casting industry to improve their machine, tooling, engineering and process capabilities in recent years.

In many ways, we have not all adapted to the shift from castings resulting from collaboration between the customers design and manufacturing engineers and the die casting supplier. Commodity buyers have replaced technical purchasing specialists. Brokers have introduced communication layers between the supplier and the final user that can inhibit the engineer and sales from properly defining quality and functional requirements. This can result in disappointed customers and frustrated suppliers. Going "off-shore" for solutions only makes it more difficult.

What then does a good project look like?

1. The designers will solicit design and manufacturing input from the casting suppliers during the concept stage of the design.
2. Purchasing departments will select qualified suppliers based on "on-site" visits and surveys. Qualifications will be based on:
   a. Quality
   b. On-time performance
   c. Engineering support
   d. Price
   e. A record of successful project management
3. When the quote arrives the sales department will solicit input from the key departments including:
   a. Quality
   b. Manufacturing
      i. Die Casting
      ii. Machining/finishing
   c. Engineering
      i. Tooling
      ii. Process
   d. Finance
4. If the above team deems the project as technically "high risk" it may be necessary to perform a flow and/or solidification simulation before completing the quote. Since this represents a significant financial commitment, this may be an item the customer would be willing to pay for.
5. At the least, the quote procedure should include calculating the process parameters. This will often forecast the ability of the machine to successfully produce the castings. This would include the following parameters:
   a. Number of cavities
   b. Physical size of the die (mold) and fit in the machine(s) to be used.
   c. Cavity pressure
   d. Locking tonnage
   e. Cavity fill time
   f. Metal melting and holding capacity.

While the above steps are not a final guarantee of 100% success, they do greatly improve the company's chances for a successful build and launch.

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