



Design for Affordability

More than 70% of a product's production cost is established during its design phase. Therefore, working product affordability into the design phase is extremely important. Barber-Nichols, Inc. (BNI) uses a process called Design for Manufacturability and Assembly (DFMA) to minimize production costs by simplifying a product and its production process. With more than 38 years of hi-tech machinery design and manufacturing experience, BNI has the experience to ensure your products are affordable.



High performance products for the aerospace and defense industries are extremely challenging and costly to design and develop. However, if they are not affordable in production, they are not a viable solution. As a result, BNI teams with commercial and government clients to ensure affordability by complimenting the client's expertise with DFMA. The result is the same high performance, high quality solution at a



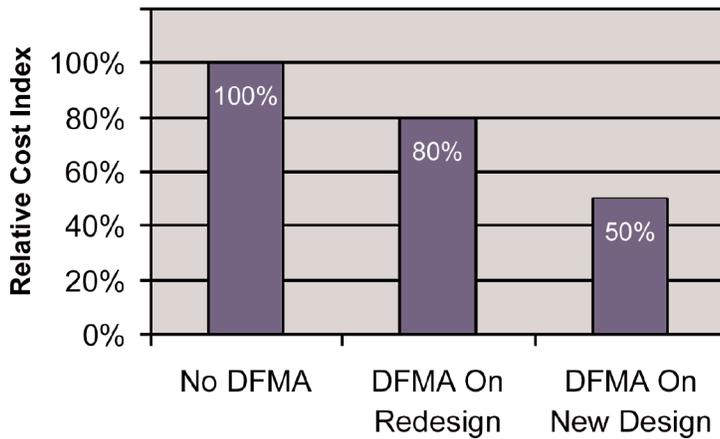
lower cost. BNI regularly works with launch vehicle propulsion systems and mission critical military hardware.

DFMA Benefits

- Reduce Prototype & Production Risk
- Decreased Production & Inventory Costs
- Improved Time-To-Market & Product Reliability
- Simplified Supply Chain Management



Effect of DFMA on Product Cost

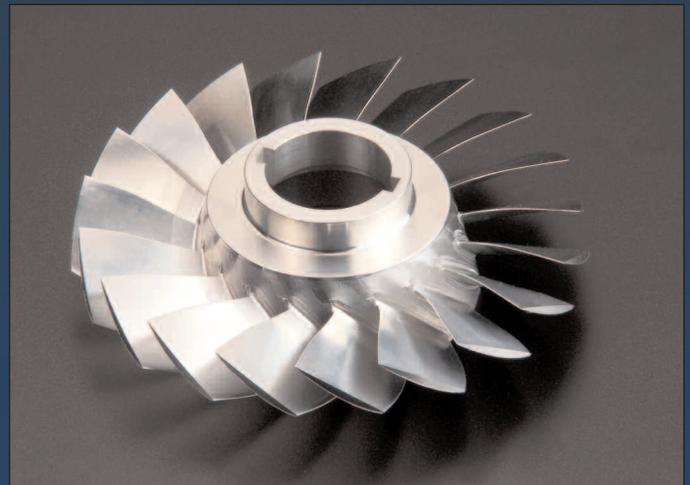


The DFMA process begins with the development of a baseline cost model. The product is then subjected to a comprehensive DFMA review where part counts and assembly steps are minimized; the most advantageous materials, tolerances, and processes are adopted; COTS components are incorporated into the product whenever possible; and custom components are designed for manufacturing simplicity. Finally, trade studies are performed to determine cost savings and clients are provided with DFMA impact reports.

Case Study

BNI and the Applied Research Laboratory at Pennsylvania State University are applying DFMA to the U.S. Navy's Countermeasure

Anti-Torpedo Torpedo (CAT) development project. CAT is a defensive torpedo that will track, actively engage, and disable a threatening torpedo before it can damage or sink a ship. The goal is to cut CAT production costs by 20%. On May 26, 2005 Congressman Bob Beauprez recognized BNI for its DFMA efforts and reported that every dollar spent on this project has yielded future production cost savings of \$15. The U.S. Navy is planning to manufacture CAT for ten years and the additional funds spent on DFMA will be fully recouped in the first year.



Please contact us to learn how BNI can compliment your organization and add increased affordability to your designs.

Barber



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