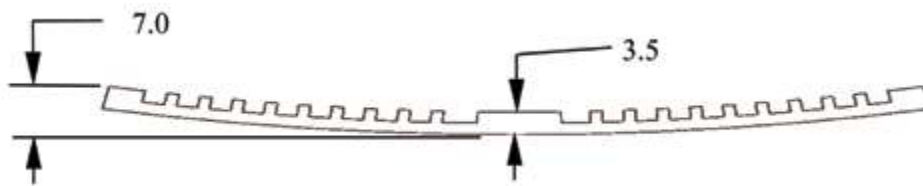




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**PRESS RELEASE**  
For Immediate Release

## REMMELE RECEIVES U.S. PATENT FOR MONOLITHIC COMPONENT MANUFACTURING



NEW BRIGHTON, MN – On December 13, 2005, Remmele Engineering announced that it had received a United States patent for the process and production of monolithic components using preformed material.

Aircraft manufacturers have been taking advantage of monolithic structures that reduce part count, fasteners, and assembly time. Remmele Engineering has received a patent for a manufacturing process that improves the technical characteristics and economics of taking such an approach. Applications include: wing skins with integral stiffeners, body components, air foil skins, doors, fuselage panels, and the like.

The patented manufacturing process incorporates a forming step at the start or after rough machining to create curved monolithic structures from thinner plate material than would otherwise be possible. The forming process is combined with high velocity machining techniques to provide thin walls and minimize stress induced by the machining process.

Using this technology allows for a potential material savings of 50%; material plate width and length can be optimized, as well as thickness, and parts can be nested on the billet for additional cost savings. Additionally, the forming process does not limit the design of structural features.

For more information, contact Dave Reynolds at 651-635-4100 or email [info@remmele.com](mailto:info@remmele.com).

### **About Remmele Engineering**

Since 1949, Remmele Engineering ([www.remmele.com](http://www.remmele.com)) has been one of the leaders in providing superior contract manufacturing services to a variety of industries including aerospace, defense, medical, and semiconductor. The Remmele Contract Manufacturing Division (CMD) has received awards for excellence from the U.S. Navy, Lockheed Martin, and Boeing and holds rights to several proprietary technologies, including ConnexSys™ metal joining system and CoolStream™ thermal management. The company also provides automation device services for clients worldwide. Remmele currently employs nearly 500 people at four manufacturing facilities throughout the Minneapolis-Saint Paul metropolitan area.

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