

## CASE STUDY: *Less distortion, greater consistency*

### THE CHALLENGE:

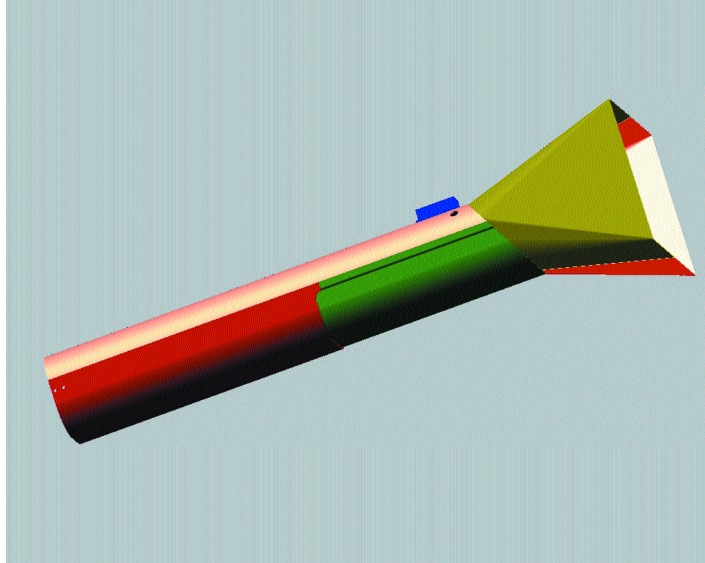
**A** tube fabricated from stainless steel sheet metal provided a challenge and an opportunity for Ace. The client, one of the world's largest packaging solutions providers for the pharmaceutical and food industries, was ever vigilant about maintaining consistent quality from their supplier of

this tube. The client understood that any trouble at assembly would delay testing and ultimately shipments to their customers' worldwide. So the packaging solutions provider decided to find a different supplier.

Ace Metal Crafts was asked to evaluate the forming tube requirements. Ace associates Deb Benning and Kevin Bailey went to the client site to determine if the fabrication was within our process capabilities. After close analysis with the assembly and purchasing teams at the client, we had a clear understanding of the part requirements and functionality. Understanding how the part works in the machine assembly is crucial to successfully fabricating to specification. It was decided to have Ace Metal Crafts build a forming tube for evaluation.

### THE SOLUTION:

**B**ack at Ace the engineering team went to work. The forming tube was a necked down type. An off-set was created in the front and sides on half of the



tube through a lap joint welded design. This design makes for extensive welding both in and outside of the tube. We knew controlling the weld distortion would create process problems causing the tube to shrink, twist, and bow. We knew we had to change the joint design while maintaining the functionality of

the part. Ace engineering collaborated with the fabrication team and came up with the idea of using an off-set bend in the sides of the tube creating a butt weld joint design. This design change did two things: it cut the welding in half and allowed the entire length of the tube to be welded on a JetLine seamer and then planished. This would greatly reduce the distortion and minimize the straightening process.

The fabrication of the forming tube was successful and Ace Metal was awarded to fabricate these and other parts for the client. We appreciate the opportunity and continue to strive to prove ideas to solve even the most challenging Stainless Steel fabrication requirements. ■

Learn more... contact Ace Vice President of Engineering Kevin L. Bailey.

10550 Anderson Place • Franklin Park, Illinois 60131  
847.455.1010 • [www.acemetal.com](http://www.acemetal.com) • [info@acemetal.com](mailto:info@acemetal.com)

