

## The Sponsor

Versatility Tool Works and Manufacturing (VTW) is a small metal works company based in Alsip, Illinois. Recently, the company has started producing tooling cabinets to accompany press brakes manufactured by Amada America Inc. However, the company has run into a few problems and decided to contact Illinois Institute of Technology for help.

## The Problem

The IPRO 341 team was charged with two tasks:

*Determining the cause of premature failure of the tooling cabinet drawer and developing potential solutions*

*Gathering market intelligence data to help the company improve and expand*

## The Crew



In order to meet all of our goals, the team organization was adjusted throughout the semester. The original, four group setup was changed later in the semester to address our needs.

Throughout the semester, the IPRO team as a whole met with the sponsor and kept them up to date on the progress.

# IPRO 341: Design and Global Market Analysis of a Tool Product

## Marketing

### Survey Results

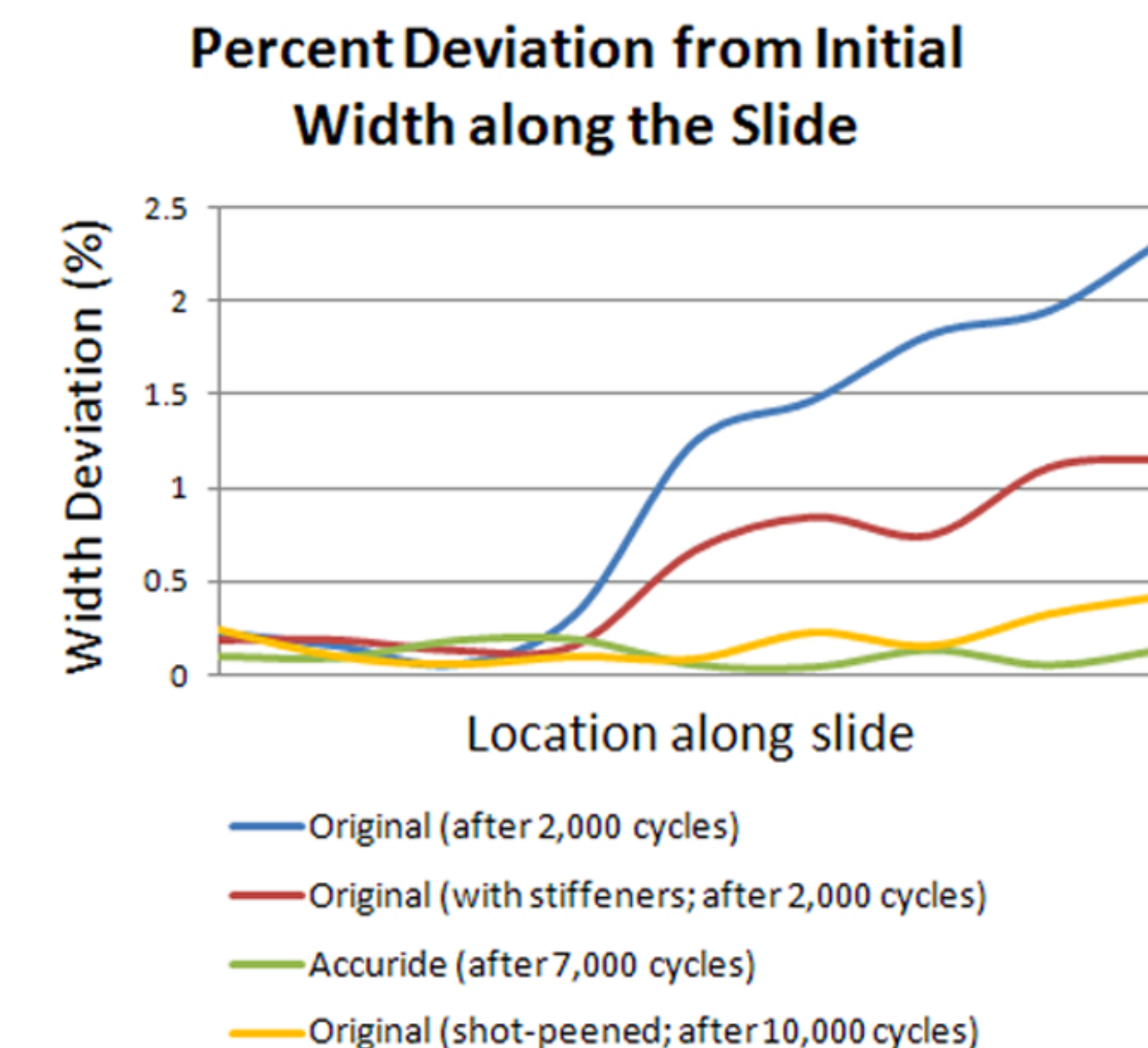
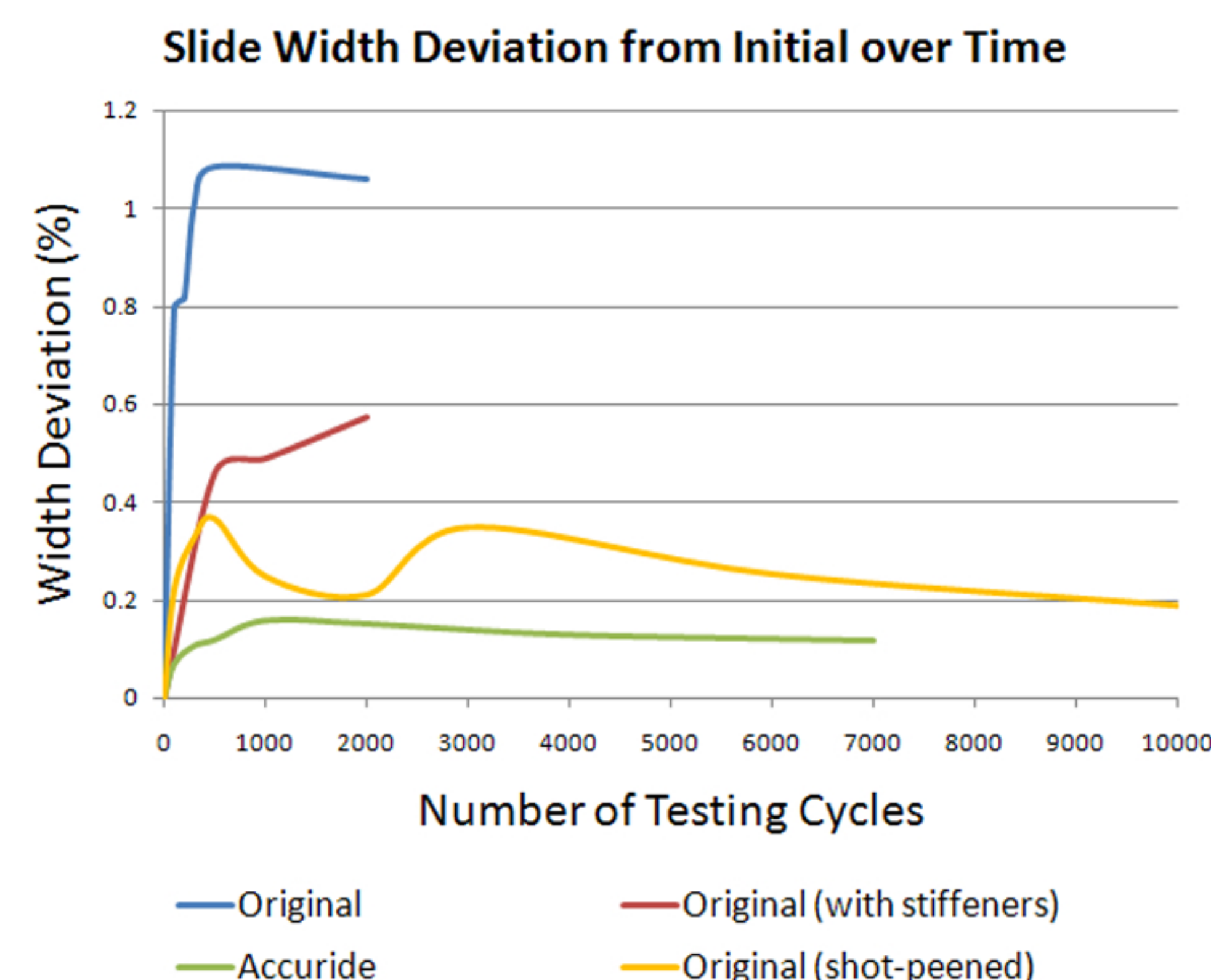
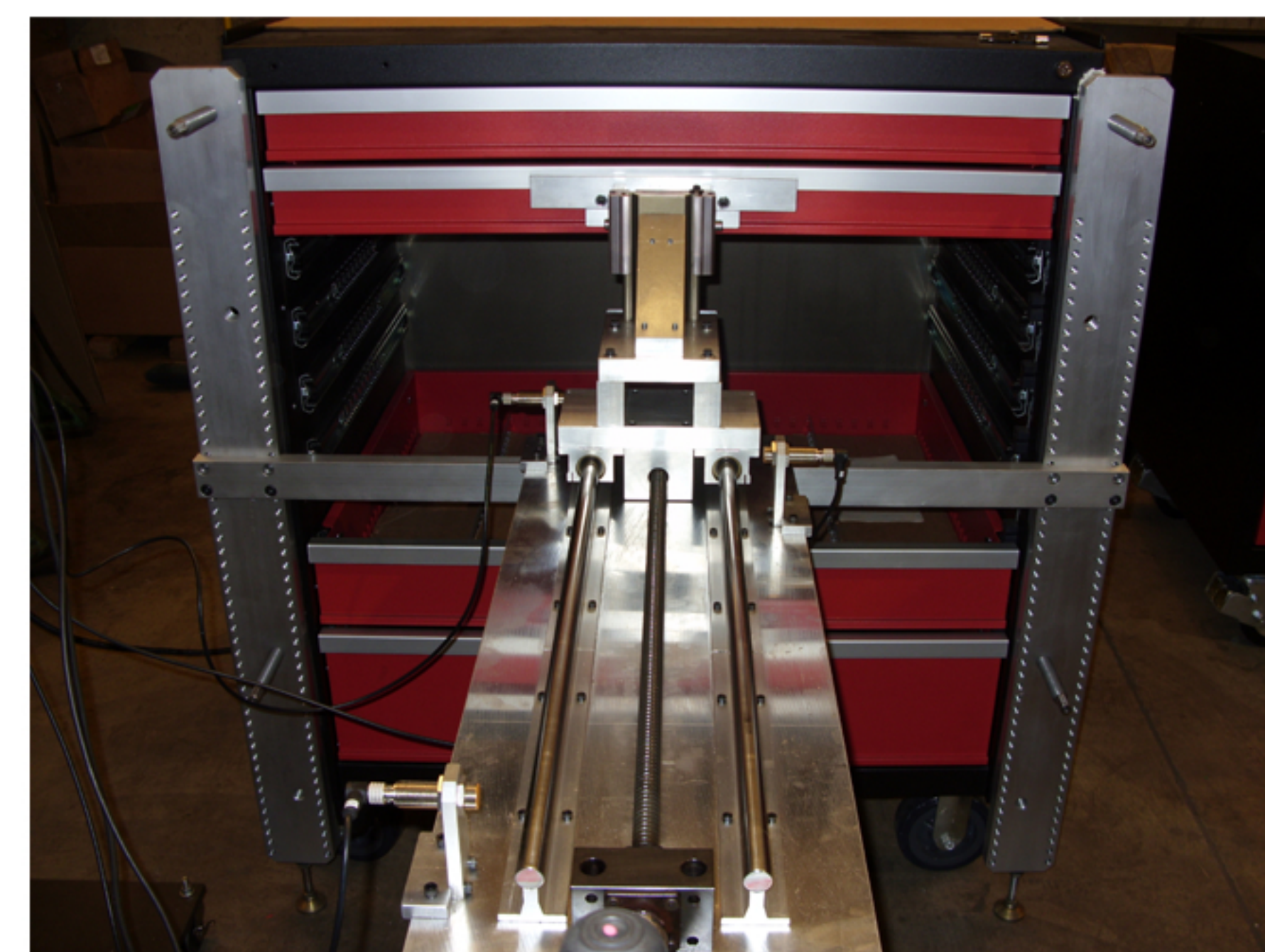
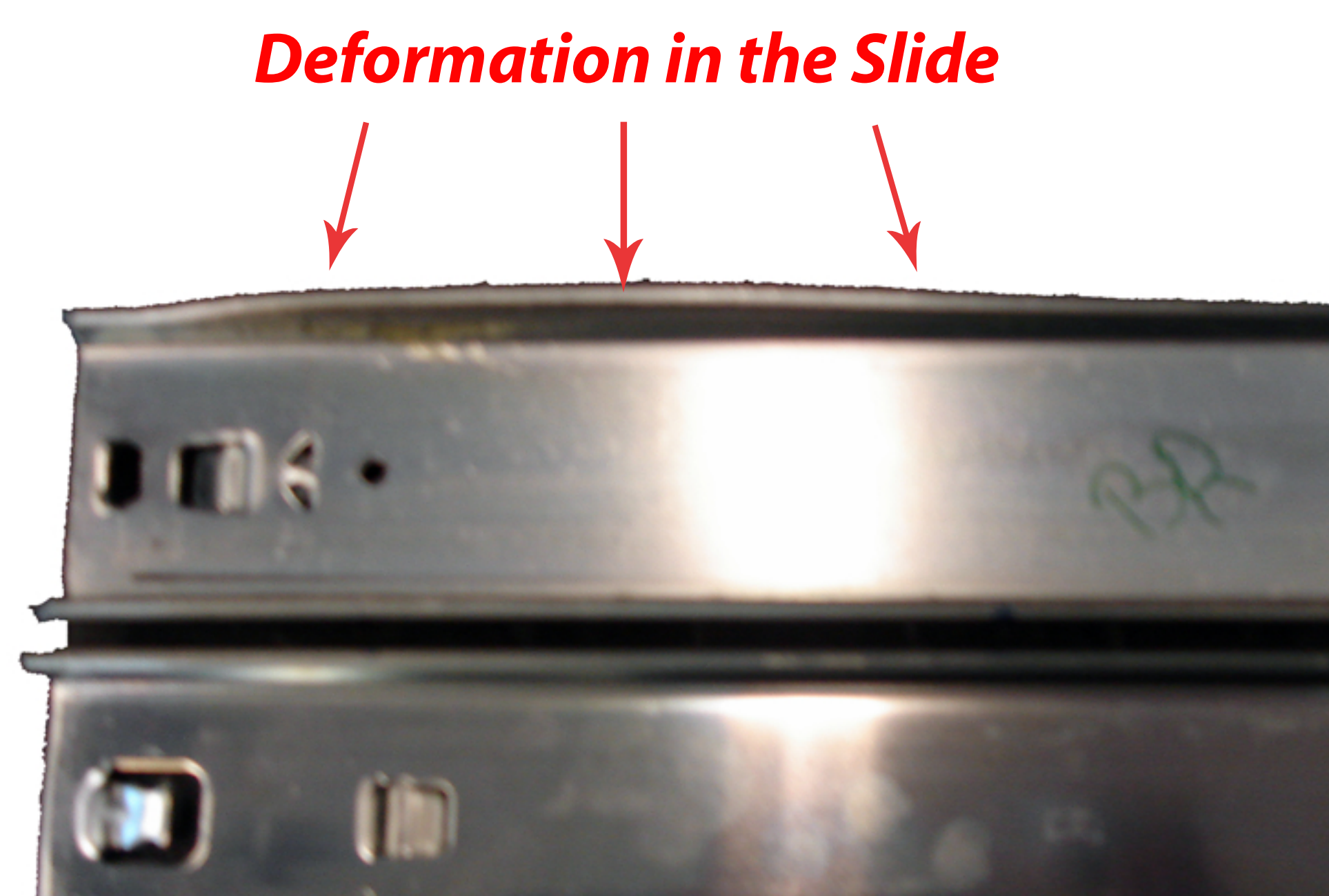
Quality:	★★★★☆	4.6
Design:	★★★★☆	3.75
Stability:	★★★★☆	4.25
Customization:	★★★★☆	3.75
Longevity:	★★★★☆	4.2

### Testimonials

*"With Versatility Tool...they listened to what I wanted and they made it."*  
--Steve Bowerman  
Amada America Inc.

*"His market is customization, and he understands that...and that's where he is going to succeed."*  
--Steve Bowerman  
Amada America Inc.

## Testing



## Nuts and Bolts

### Testing Team

Yield strength of the original slides was too low (HRB 55). Slides deformed and caused drawer failure after only 5,000 cycles of opening and closing drawer.

Accuride® slides were tested to be significantly harder than original (HRB 72). Drawer showed no signs of failure even after 7,000 cycles.

As a cost effective solution, stiffeners were added to inside of drawer to prevent bending. Drawer started jamming after 8,000 cycles.

Original slides were hardened using shot-peening (HRB 67). Drawers showed no signs of failure after 10,000 cycles.

### Marketing Team

Using SurveyMonkey.com, the team created an electronic customer satisfaction survey that addressed the major areas VTW was using to promote their tooling cabinet.

Surveys emailed to 62 customers who provided their email addresses. 5 customers responded so far.

A testimonial by Amada America Inc. tooling supervisor was video recorded and edited into a short video clip to be displayed on VTW website.

## Conclusion

The IPRO team has made a lot of progress in the time span of one semester. A significant amount of data and insight has been obtained about the root causes of the premature failure of the tooling cabinet drawers. The marketing team has conducted the first-ever marketing efforts for VTW and was able to collect data on potential improvements and additions to the tooling cabinet, which will serve to expand the customer base and increase sales.