



Achieving Competitive Excellence

The United Technologies Operating System

Sikorsky O&R Summary Report:

Plastic Engineering's Tool Tray/FOD Shadowbox Solution



Tool Photo Box System

The Hardware

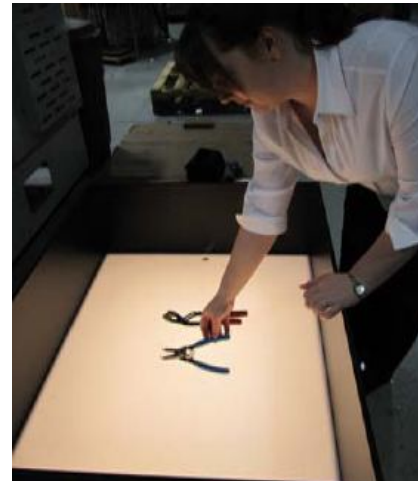




Photo we download to Plastic Engineering



The End Result



Tool Tray Log (Example)

Picture #	Discard?	Cell ID #	Bench ID #	Tray ID #	Tray Size
010		Warehouse	A -Metric Wrenches	1	12 x 18
011		Warehouse	A -Metric Wrenches	2	12 x 18
012		Warehouse	B - Screw Drivers	1	10 x 12
013	X	Warehouse	B - Screw Drivers	1	10 x 12
014	↑	Warehouse	B - Screw Drivers	2	10 x 12

Summary Report

- **User-friendly system:** Easy to use. Minor learning curve issues but quickly resolved.
- **Technical Support:** Excellent. Plastic Engineering staff have been very responsive.
- **Chemical resistance of the shadow board material:** We soaked the material in Acetone for 4 days and witnessed no degradation. We also immersed the same test sample in “Boelube” cutting fluid for three days and there was no deterioration.
- **Cost:** Competitive with two-layer foam. We expect it to stand up to normal wear and tear for a longer period of time than traditional foam board. This will reduce the cost, and effort of periodic replacement.
- **Other:**
 - The shadow board material is robust against normal abrasion and is not expected to break down as tools are inserted and withdrawn (reducing the likelihood of the shadow board material becoming a source of FOD).
 - Plastic Engineering will archive our digital photos. If replacements are needed, an email is all that is required.