

Advantages and Disadvantages of Achieving Each Drawing Level

By Alex Krulikowski

	Level One Standard Compliant	Level Two Mixed Method	Level Three Functional Design
ADVANTAGES	<p>Easy to determine if drawing meets guidelines</p> <p>Quick to measure, easy to monitor for continuous improvement</p> <p>Immediate improvement in drawing quality and enables some organizational benefits</p> <p>Immediate improvement for inspection, outsourcing, suppliers</p> <p>Promotes the use of GD&T</p> <p>Creates an atmosphere where individuals must make drawings that follow standards</p> <p>An easy win</p>	<p><i>All the advantages of Level One, plus the following:</i></p> <p>Begins to promote the idea that the drawing contains the functional requirements for the part</p> <p>Creates discussions about functional dimensioning</p> <p>Immediate improvement for inspection, outsourcing, suppliers</p> <p>Creates an atmosphere where individuals must communicate the part function through the part dimensioning</p>	<p><i>All the advantages of Level Two, plus the following:</i></p> <p>Focuses the organization on the functional requirements for the part</p> <p>Will be able to anticipate and resolve most product problems before production.</p> <p>Shorter product development time</p> <p>Lower inspection and tooling costs</p> <p>Lower manufacturing costs</p> <p>100% part interchangeability</p> <p>Easier to evaluate product change requests</p>
DISADVANTAGES	<p>Limited benefits to organization</p> <p>May still encounter product problems</p> <p>Does not promote the understanding of converting customer requirements into dimensional requirements</p>	<p>Does not help the ongoing struggles between engineering, manufacturing, and inspection.</p> <p>May still encounter product problems</p> <p>Is difficult to measure and monitor for continuous improvement</p>	<p>Requires upper level management to create cross-department guidelines</p> <p>Requires upper level management to create a company culture based on customer requirements</p> <p>Some employees may not be able to make the transition</p> <p>Requires a well trained workforce in all areas</p>

From "How Good are Your Company Drawings," by Alex Krulikowski
ETImail, Vol 2, Issue 6



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