

How to predict injection mold shrinkage?

Injection mold technologies seminars may help mold companies to educate their people. But I think that each injection mold shrinkage problem you face in real life is caused by too many effects that one rarely can keep track of it.

1. One thing you always should keep an eye on is the crystallization of materials which is responsible for the biggest part of the shrinkage. And this crystallization is not just influenced by the process (PVT- is one head point).
2. But also by the limitations made by the machine and the injection mold (cooling time-->crystallization rate).
3. Also the fillers in a material can have so much influence on crystallization.
4. Also keep in mind that post process shrinkage also causes crystallization and thus injection mold shrinkage.
5. Not every part has uniform wall thickness, this will cause ununiformed shrinkage occurs.
6. Also so-called amorphous thermoplastics are not 100 % amorphous und thus can shrink depending on the overall conditions named above.