

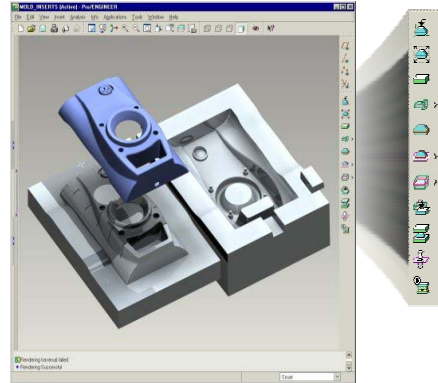
## Pro/ENGINEER Tool Design

### Radical productivity gain for mold and casting cavity design

Pro/ENGINEER Tool Design provides mold and casting designers the tools to rapidly create mold inserts, and casting cavities and patterns. In addition, Pro/ENGINEER Tool Design provides the powerful parametric surfacing capabilities needed to create complex parting surfaces.

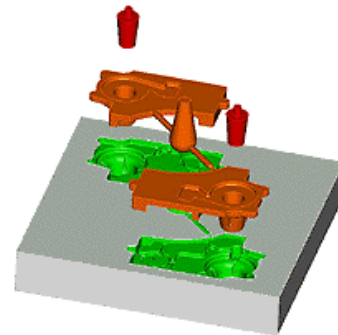
#### Pro/ENGINEER Tool Design - Mold/Casting Cavity Design

Pro/ENGINEER Tool Design provides the tools to quickly design mold and casting cavity geometry and patterns. Through specialized functionality and an easy to use process-driven UI, mold and casting designers can rapidly develop inserts, casting cavities and patterns. Since the models created reference the design model directly, changes to the design model are automatically reflected in the tooling and patterns.



#### Capabilities Overview

- Graphically evaluate draft, undercut and thickness as well as projected area
- Two separate process-driven UI's, one for mold and one for casting, are provided that guide you through easy step-by-step mold and casting cavity and pattern creation
- Create/modify any feature required to improve moldability – draft, round, complex surfaces, parting line
- Compensate for shrinkage iso-tropically and anisotropically
- Automatically create the parting line by merely selecting the mold opening direction
- Automatically create parting surfaces including steel-to-steel shutoff surfaces
- Automatically check for mold lock condition with mold opening and interference checks
- Automatically calculate the fill volume
- Easily create patterns and sand which cores reference design part geometry
- Automatically split using the parting surface and create solid models automatically
- Create mold specific features such as runners and gates



#### Benefits

- Shortens the time to develop mold inserts and casting cavity and pattern geometry reducing modeling complexity
- Automates the difficult and time consuming process of making parting surfaces
- Easy-to-use UI's for both mold and casting allow users to come up the learning curve quickly
- Because the mold inserts are built by referencing design part geometry, the cavity is always current with the design part
- Shrinkage compensation permits easy compensation by dimension or by scaling the entire model in X, Y and Z
- Integrated with Pro/ENGINEER Plastic Advisor for mold filling simulation
- Creates solid models of inserts can maintain an associative link to Pro/ENGINEER NC applications – if the design part changes, the mold inserts and NC toolpath update