Keys to Successful RealWax™ Casting

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Recommendations for Foundries

• Information about wax patterns to communicate with the foundry
  – Wax part temperatures
    • The CP and CPX patterns become brittle if cold.
    • Keep parts at room temperature around 72°F 22°C.
  – Storing parts
    • Wax parts sag over time if not supported when stored.
    • It’s recommended that you invest the patterns as fast as schedule allows
  – Casting de-bubbler solution
    • Most bubble prevention solutions contain alcohol which can pit the part surfaces.
    • Test your specific de-bubbler to verify it does not cause surface defects
    • When using de-bubbler process tree assemblies immediately versus spraying and waiting until morning to process.
Recommendations for Foundries

• Information about wax patterns to communicate with the foundry
  – RealWax processes just like standard investment casting wax.
  – RealWax is more brittle than standard investment casting wax.
  – RealWax has a lower melting temperature than most investment casting waxes.
    • RealWax melts at 80°C  176 ºF
Wax Quantities

• Foundries have a standard wax/casting yield
  – On average this is 95%
  – It’s recommended that you supply 105%+ wax patterns to address this yield

• Examples
  – 1 casting required/2 wax parts delivered
  – 5 casting required/6 wax parts delivered
  – 20 casting required/21 wax parts delivered
  – 40 casting required/42 wax parts delivered
Part Design Guidelines - Support

As with conventional wax patterns, fragile geometry can distort. With digital RealWax patterns you can:

- CAD Design in complex stabilizing mounts to the parts to prevent sag or break.
- The mounts can be removed during the wax up
- Or they can be used as gates and sprue

Production Part
Wax Part designed to support ends from sag

Production Part
Wax Part designed to support fragile tips
Part Design Guidelines - Gating

• Add gate contacts to the part
  – Determine where the part is going to be gated and add the contact points to the part
  – CAD Design the contact points on the part make for easier and cleaner removal when the part is in the metal state.
Part Design Guidelines - Fillets

• Filet all sharp edges
  – Sharp edges are weak areas
  – Metal does not flow well with sharp edges
Part Shipping Guidelines

• As with conventional wax patterns, isolate Fragile Real Wax patterns from stress and shocks during shipping.

• Suggested Shipping method:
  – Use Buffalo Snow for wrapping the part.
  – Use a super seal shrink wrap machine to bag the parts. (not too tight this will load the pattern)
  – Float the parts in a box with peanuts.
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