**THE INVESTMENT CASTING PROCESS**

**STEP 1  
CAST WAX MODEL**
Create a wax model of the casting part by using high-temperature wax.

**STEP 2  
ASSEMBLY**
Attach the wax models to a gate or system. Multiple patterns are assembled for large quantity production.

**STEP 3  
SHELL BUILDING**
Dip the system into ceramic, building up layers so it is thick enough. The shell is typically 3/8" thick.

**STEP 4  
DEWAXING**
Melt the wax out of the cavity, leaving a hollow ceramic outer layer.

**STEP 5  
POURING & SOLIDIFICATION**
Heat the cavity, to prevent shock of the metal, and pour the metal into the ceramic shell.

**STEP 6  
SAWING/CUTTING**
The process of removing the casting from the runner system.

**STEP 7  
CUSTOMIZATION**
Grind until the part meets specifications of original part. Some parts may require additional heat treating. Depending on tolerance requirements, some secondary machining might be required for proper function.

**STEP 8  
FINISH**
Measure the new part using advanced tools to make sure the new part is an exact duplication of the original casting.