Barrel Heater Maintenance and Installation

Barrel heater maintenance and installation
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Optimum heat transfer between a cast barrel heater, and the barrel occurs when maximum surface area between the two is established, and the heaters are fully clamped.

After years of use, gradual loosening of the clamp bands can allow hot spots to develop (where clamping pressure was lowest) and, in extreme cases, allow the heater aluminum to melt and flow.

When this condition is found, be certain to remove all melted aluminum from the barrel surface, and fully clean the heater ID surfaces so that good surface contact can be re-established.

Blow through the cooling coils (if so equipped) with compressed air, to be certain they aren't blocked.

A thin coat of Anti-Seize or Infra-Kote can be applied to the barrel and/or heater halves during reinstallation to increase heat transfer.

When clamping up on the heater straps be careful the heater(s) aren't tightening up against a thermocouple extension — this can collapse the extension wall, and (in severe cases) can even shear the thermocouple in half!

During the next maintenance cycle (or after a month has elapsed) retighten the strap clamps.

Typically, they will loosen up from heater cycling.

— Robert Welker

See also:

- Heater replacement
- Heating modes for extruder barrels
- Machinery installation
- On/off barrel cooling control
- Optimization of cast aluminum barrel coolers

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