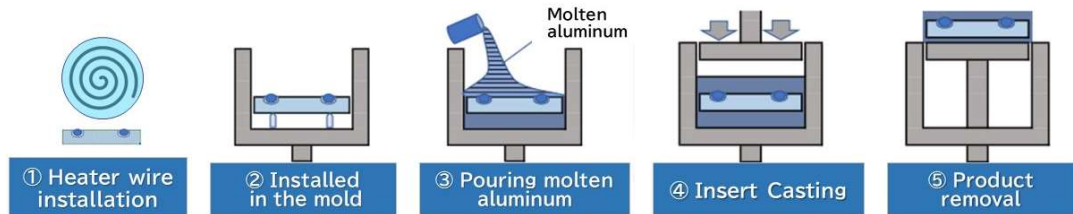


Other materials are inserted in cast aluminum

■ Overview

- Technology to wrap heater wires and water cooling pipes in molten aluminum
- Casting with molten aluminum eliminates the air layer between the aluminum and other materials. Direct contact of the two materials greatly improves thermal conductivity and heat uniformity.
- For high-temperature applications, it is also possible to cast ceramics and graphite at the same time.

Manufacturing process of Insert Casting Heater



■ Feature

- By eliminating voids, thermal conductivity and heat uniformity are dramatically improved.
- Since there are few blowholes, it has excellent heat transfer and heat uniformity, so the reliability of the material is high and the performance of the heater is improved.
- Heaters can be cast in composite material and covered entirely in aluminum that can be anodized
- Usable in vacuum
- Usable at high temperature (450 degrees)

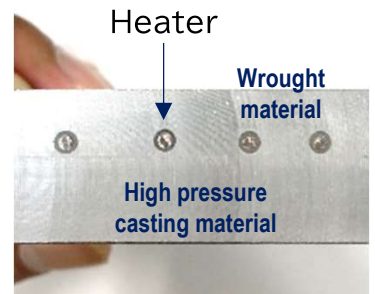
■ Structure of Cast-in Heater



U-groove aluminum plate for heater



Casst-in Heater



Cross section of what made with Squeeze Casting

■ Application



Heater for semiconductor manufacturing equipment

- Possible to replace the material used as the current heat control
- product Can be used in a vacuum
- Usable size: 6 inches, 8 inches, 12 inches
- Working temperature: ~ 470°C
- Material: A1070, A5052, A6061 etc.
- Applications: Etching, Ashing, Annealing, CVD

Heaters for industrial manufacturing equipment

- Application: vacuum distillation regenerator, etc. Material: AC4C
- Examples of possible applications : Vacuum pumps, industrial heaters, temperature control equipment, etc.

