

## Case Study #168: Shimstock Thermocouple Solution

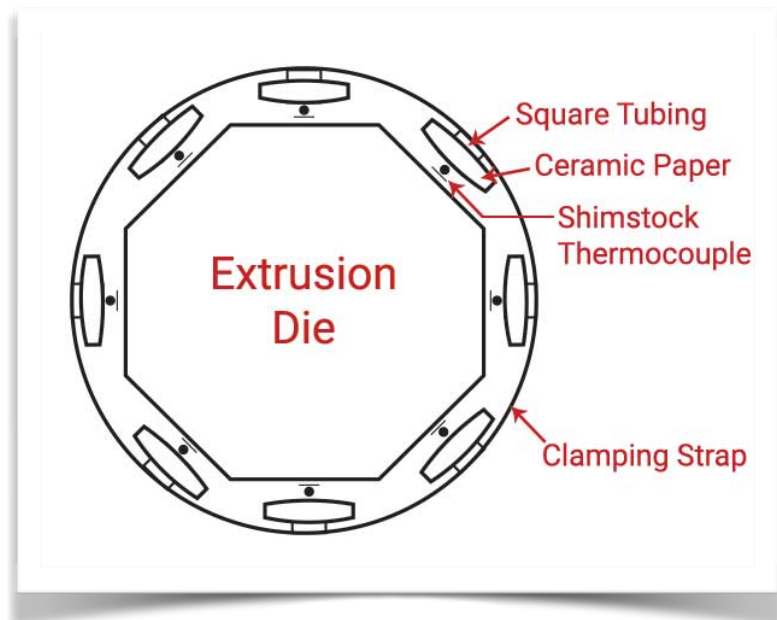
### A Customer's Question

In 2014, a customer called about an octagonal extrusion die. This octagonal extrusion die had three zones. The customer wanted to know how he could monitor the temperature of each face of the the octagon for all three zones at once.

### How To Monitor All Three Zones

Each face of the octagon would require a thermocouple. We recommended a shimstock thermocouple. Shimstock thermocouples are used to measure surface temperature. (Click [here](#) to view our Shimstock Thermocouple - Configuration 261.) As opposed to probe-type thermocouples that are inserted into a hole to read temperature inside a barrel or melt, shimstock thermocouples are typically terminated at 3/4" x 3/4" flat metal plate that is then mounted to a flat surface. After determining the thermocouple type, lead termination, and lead lengths, we had a question. How do we hold these thermocouples in place? We needed three thermocouples for each of the eight faces of the die. 3 zones x 8 faces = 24 thermocouples.

We also recommended that there be a covering for each with a 2" x 2" piece of 1/4" thick ceramic paper, then on top of the ceramic paper, something like a piece of square tubing to press down on it. This would also press down on the thermocouple and hold it tightly in place to the faces of the die. This allowed our customer to monitor the temperature of the three zones for each face of the octagonal extrusion die. Problem solved!



### Have a Question Regarding a Heating Application?

Then, contact the Thermal Corporation engineers! They are available to chat with you Monday through Friday from 7:00 A.M. to 4:30 P.M. (CST).

### Engineering Department Contact Info

**(800) 633-2962**

Our 800 toll-free number will connect you directly to our customer service department, just ask to speak to one of our engineers!

*(256) 837-1122 x152*

This is our local phone number with extension. It will connect you directly with the head of our engineering department!

*engineering@thermalcorp.com*

This email goes to our engineering department. Send us an email and one of our engineers will be in touch with you within 1-2 business days.

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