



## CASE NO. 19

**PROJECT:** ImClone Systems, Inc.

**LOCATION:** Branchburg, NJ

**MECHANICAL CONTRACTOR:**  
Tri-Tech Energy, Inc.

**APPLICATION:** Multi-MOD control  
up-grades existing steam boilers

### Heat-Timer Multi-MOD Breathes New Life into Steam Boilers at Biopharmaceutical Company ImClone Systems

**PROBLEM:** ImClone Systems, Incorporated, a company dedicated to developing and commercializing novel therapeutic products in the field of oncology, had all but outgrown two existing low pressure steam boilers at its Branchburg, NJ facility, home to the biopharmaceutical company's manufacturing and product development departments. The boilers, used primarily for HVAC and some weekend process steam generation, were approximately 20 years old. Continuous growth at the facility, and rudimentary control, had pushed the boilers to their service limit.

The two boilers operated on simple lead/lag pressure transmitters and modulated based on pressure, but the methodology was crude. There was no anticipatory logic, no timers in the circuit, and no analog control. As a result the boilers were often in a high fire/low fire configuration, with one operating at 100% and the other operating at 15%. This not only placed uneven wear and tear on the boilers, but the instability of the flame, particularly at low fire, was damaging the burner.

Project Manager David Czerwonka, in the company's Project Engineering department, had to make a decision: Replace the boilers or somehow improve the controls to meet the growing demands of the plant.

**SOLUTION:** ImClone Systems, a dynamic company dedicated to developing breakthrough biologic medicines in the area of oncology, is all about innovation and growth. With the help of Michael Tartaglia, an owner of Tri-Tech Energy Inc. ImClone Systems came up with

an innovative way to extend the service life and improve the efficiency of these older boilers using a Heat-Timer Multi-MOD full modulating boiler control.

The Multi-MOD controls the operation and modulation of each boiler stage to maintain precision temperature control. Only one sensor (located in the common steam header) is required, regardless of the number of boilers being controlled. Boilers are automatically rotated according to the user's specifications (i.e., first on/first off, every 24-hours, etc.) The Multi-MOD's 80-character alphanumeric digital display and easy-to-follow menus make it easy for the user to change any system setting. Password protection is available to prevent unauthorized users from making adjustments to control settings. Most important, the Multi-MOD provides accurate, seamless modulating control via PID-type logic. This enables the control to anticipate rather than react to changes in load.

"By putting in the Multi-MOD, we can now dial in specific ounces of pressure. If you want 15 lbs. you dial in 15 lbs. and that is what you get," says Michael Tartaglia. "Because it is anticipatory, it maintains very even pressures."

ImClone System's loads fluctuate a great deal, due to changes in processes, as well as seasonal changes. Because the Multi-MOD is so easily adjusted through its digital display panel, keeping up with these changes is no longer a challenge, explains Dave Czerwonka.

"We can easily change set points, time delays, rotations, etcetera, whenever we need to."

The superior modulating control of the Multi-MOD has improved the day-to-day operation and efficiency of ImClone System's steam systems. The new control is expected to extend the service life of the boilers, demonstrating that accurate modulating control is the best treatment a boiler can be given.