

Advanced Radiant Design • Hill House Productions • Saugerties, N.Y.



Left Brain Radiant ...

by Steve Smith

John Abularrage entered the radiant industry back in “the pioneering days” of 1979 when he did research and development for Bio-Energy Systems. The company manufactured a product called Radiant Roll. Abularrage ran a series of experiments in a specially equipped environmental room to determine sizing guidelines.

He’s been involved in other aspects of radiant ever since and ultimately founded the precursor of his current company in 1986. Advanced Radiant Design’s business is exclusively radiant, with about 65 percent of the work in residential and 35 percent commercial.

This is the first year the company entered the RPA’s System Showcase Award com-

petition. Abularrage took home two first-place awards, one of which appeals to the artistic and the other, the logical:

Hydronic Retrofit

It’s hard for this job not to end up artistic since Hill House is designed to house artists-in-residence and provide them studio space for their work.

“It’s a meticulous restoration of an old building, with art integrated into every detail,” Abularrage says. The 6,000-sq. ft. building originally was a schoolhouse built in 1876.

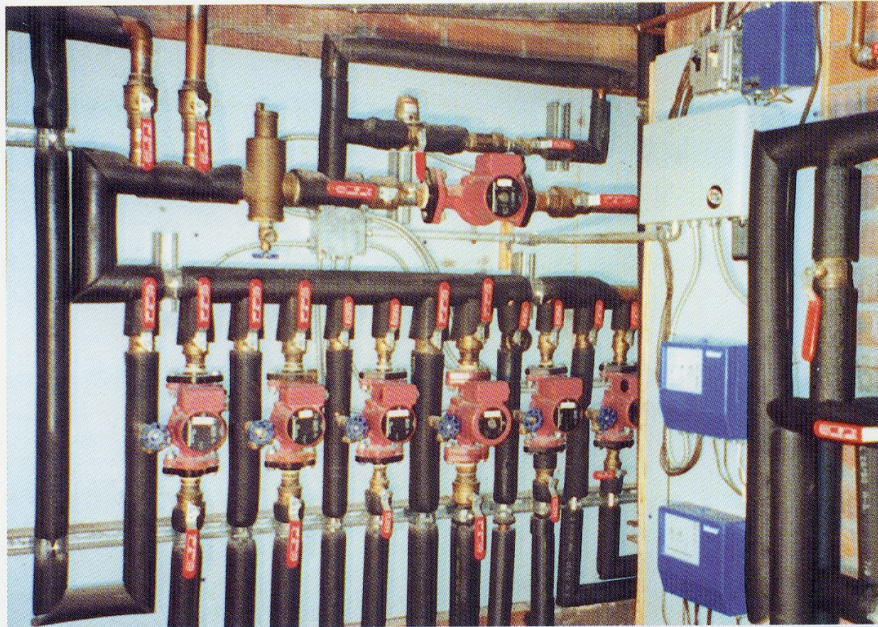
Two years ago, Advanced replaced an existing boiler with two Weil McLain GV boilers. The vent and the air intake for each was routed through an old chimney cavity and then through three layers of brick in

the outside wall. To preserve the appearance of the building, several artists ground up bricks and coated the cover plates with the brick dust. To complete the faux finish, the artists applied mortar lines, continuous with the actual lines. (See front cover)

In 1997, Advanced installed a 5-ton Spacepak air-conditioning system to cool a number of rooms, including the kitchen. The system’s 2-inch vents specifically were integrated into the geometric design of the kitchen’s original tin ceiling. In other rooms, custom cabinetry helped conceal the outlets.

Advanced has completed a number of radiant jobs at Hill House, with the first done in 1987 when the company installed a radiant slab in the basement. “At the time, we were the only ones in the

Hydronic Retrofit



Runtal towelwarmer provides supplemental heat in the Solarium/Hot tub room.

Hudson Valley doing radiant,” Abularrage explains. “If anyone in the area wanted radiant heat, they found their way to us.”

The rundown reads like a laundry list of radiant expertise:

- In 1991, Advanced removed the original radiators on the first floor and installed three zones of radiant floor heat. A tekmar 370 house control was installed to provide outdoor reset and

indoor temperature feedback for the radiant zones. The basement slab, done four years before, was tied into the control system.

- In 1997, Advanced was called in to provide heat to six rooms on the second floor. Structural constraints ruled out radiant or baseboard. Instead, two constant circulation loops with Monoflo® tees feed 10 kick-space heaters and two recessed radiators. To

provide individual room control, the loops are controlled with a warm weather shutdown control in series, with end switches on the thermostats. Thermostatic radiator valves and remote dial sensors control the recessed baseboards. The piping from the basement had to be routed through old chimneys.

- Also in 1997, Advanced installed a high temperature loop to the solarium, where the existing floor prevented the installation of underfloor radiant. The zone consists of two tiers of fin tube installed between the hot tub and adjacent windows. A custom enclosure for the fin tube “catches” the cold air dropping from the windows and heats it before reaching anyone enjoying the hot tub. A Runtal towel warmer also provides heat. Two additional high temperature zones feed hydronic fan coils to heat two artist studios.

- In 1999, Advanced installed a high temperature zone to feed five Runtal radiators in the basement, plus another high temperature zone to heat the hot tub through a stainless steel heat exchanger.

- In 1999, Advanced also installed a system to heat a guest cottage with one zone of radiant staple up. The system also provides domestic hot water and heats two garages with fan coil heaters.

Is there anything left to do? Maybe not for the old schoolhouse, but Abularrage reports the owners recently purchased a building across the street, built circa 1736. Advanced soon will begin installing radiant for that structure.

Hydronic Retrofit



Second Place

Jacobs Residence, Basalt, Colo.
Aspen Solar



Third Place

Wetherburn Drive Project, York, Pa.
E.W. Behler Inc.