

The End of the Beginning...

News for which we have all been waiting ... Two major technical developments reported in this issue promise to accelerate the commercialization and therefore the acceptance of cold fusion and new energy.

First, we are happy to bring news of a technology that has been in development since the early 1980s, the "Kinetic Furnace" of Kinetic Heating Systems, Inc. of Cumming, Georgia. The invention of Eugene Perkins and Ralph E. Pope is an electric motor-powered rotary cavitation water heater, of the type we have discussed in previous issues of *IE*. This one seems to have been optimized to work very well, indeed. It is nearing turn-key commercial application.

Already operating in the multi-kilowatt range, it appears to have a solid track record of verified production of more energy output than electric energy input (usually about 4.0 kilowatts input). Its coefficient of performance is typically 1.5 (the ratio of output thermal power to input electrical power), but there are often excursions approaching 2.0 and beyond. Self-sustained operation, extracting vast amounts of energy from small quantities of water, is a distinct possibility if the process can be better understood, stabilized, and improved.

The other development, which was revealed in April at ICCF-7 (The Seventh International Conference on Cold Fusion), soon after we had performed a preliminary on-site verification of the the Kinetic Furnace is the "catalytic fusion" process of MIT-trained chemical engineer Dr. Les Case.

Dr. Case has been working on catalytic fusion for over six years. He arrived at his discovery by brilliant chemical engineering intuition and an Edisonian testing process. It appears to be a nearly optimal embodiment of the original Fleischmann-Pons process. A pre-treated activated carbon catalyst with 0.5% to 1.0% palladium or other catalytic metal content apparently can catalyze the fusion reaction of heavy hydrogen (deuterium) gas to helium at elevated temperature (150 to 250 °C). The process is amazingly simple, though the path to its discovery was anything but easy, as we recount in our article about Dr. Case's triumph. That Dr. Case holds four degrees from MIT might make even some die-hards at that

"bastion of skepticism" against cold fusion think twice.

This catalytic fusion development paves the way for simple self-sustaining demonstration units—*soon*—that could be widely sold and distributed. These would produce massive amounts of heat for long periods (weeks, months, or years) with *zero* input power, once the reaction was initiated by an external heater. Electric power production on a small scale, by thermoelectric or steam turbine conversion, could follow quickly thereafter. The process appears amenable to scale-up using fluidized beds of the catalyst through which deuterium gas is circulated.

The reason we are hearing from Dr. Case at this late date, even though by good fortune he lives not far from us in the state of New Hampshire, is that he was waiting for his international patent application announcement to issue. It has, and in this issue we have reproduced the historic document in full.

Beyond the all-important technical news behind these developments and the considerable validation that has already occurred for both, we are happy to report that both Kinetic Heating Systems, Inc. and Dr. Case are being pleasantly open about their achievements. Dr. Case has supplied sufficient information for any laboratory to replicate his process and he *wants* others to duplicate and verify it. How refreshing! Of course, he has a significant patent position already underway worldwide and welcomes joint ventures.

Very good news: On April 30th, Dr. Case came to our laboratory in Bow, New Hampshire and with a mixture of his equipment and ours, we were able to observe the astonishing excess power effects of which he spoke at ICCF-7. To see an active cell with *heavy* hydrogen gas and commercially available catalyst maintain a temperature of 13.2 degrees above the baseline control with ordinary hydrogen, made our day—made our *life*! (See our full report on page 33.) The system is an experimenter's dream come true. If we were not so busy putting this issue together in the first week of May, we would be experimenting with this and the Kinetic Furnace round-the-clock.

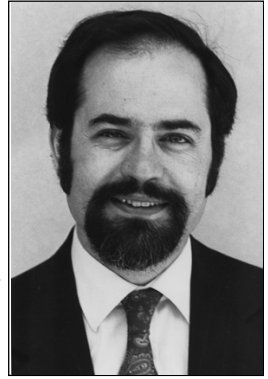
The Kinetic Furnace has four U.S. patents already backing it up, the last of

which we reproduce in full in this issue. One of the largest water heater manufacturer's in the world—State Industries of Tennessee—is said to be looking at the device seriously for commercial hot water applications. That company is known to be surveying this field carefully. After all, any company that is vending energy producing devices and which does not take cold fusion and new energy seriously, is in grave and growing danger of becoming extinct in the foreseeable future.

We appear to have reached a major turning point. This could be the proverbial "End of the Beginning" phase of the New Energy Age. Prior to this time, it was difficult or impossible for those trying to satisfy themselves that these new energy sources are real to "see, feel, and taste" the new devices. Now with powerful and potent demonstration units and easily reproducible processes available, the New Energy Revolution can take its natural course. We hope for and expect a rapid ramping up of commercial activity.

Some notable skeptics—and even some discouraged adherents of cold fusion science—may have thought that ICCF-7, which met in the exceptionally beautiful city of Vancouver, Canada (April 19-24), would be a morose affair. It was anything but. A lot of "new blood" has come into the field—many young scientists were there and reported on their research. Physics Professor John Dash of nearby Portland State University (Portland, Oregon) is leading the field with a well-trained group of students, one of whom may have been the first anywhere to receive a Ph.D. exclusively for cold fusion work. There were over 200 meeting attendees, including scientists, engineers, inventors, and investors.

A new face in cold fusion, Dr. Bruce L. Cain of Mississippi State University, led off the program by describing a new electrolytic cold fusion process in which 200 watts of thermal power were produced for 20 hours—with no input power after initiation! He provisionally ruled out



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conventional chemical explanations for this effect and has managed to reproduce the process.

Though others might have been discouraged by the official Japanese NHE program's demise (due, in our view, to gross technical mismanagement), the cold fusion torch burns brightly in Japan as reports at ICCF-7 revealed. To cite but one example: Mitsubishi Heavy Industries reported an astonishingly well-instrumented experiment in which researchers simultaneously observed cold fusion excess heat, low-level X-rays, and transmutation of palladium to other elements with anomalous isotope ratios. It is exquisite work that has the support of top management at Mitsubishi.


Italian researchers, led by Dr. Francesco Celani, confirmed the phenomenon of transmutation of thorium in a cell provided by The Cincinnati Group. There were many other papers evidencing both transmutation of metals and excess heat.

This was perhaps the first ICCF conference in which commercialization of cold fusion phenomena was repeatedly addressed by conferees reporting high level results. Our feeling is that the next ICCF, which will be held in Italy in the fall of 1999 and which will be the last International Cold Fusion Conference before the Third Millennium, will feature many more papers on working commercial prototype systems.

As we prepare for our own Cold Fusion and New Energy symposium here in Manchester, New Hampshire next October 11th (please make your reservations soon), we already anticipate a number of demonstration devices being present at the conference.

We also relish the completion by next fall of a professional cold fusion video documentary, which thanks to the bequest of a benefactor we were able to begin making by having interview footage of scientists at ICCF-7. This video will be sold commercially and offered (for a fee) to any broadcast network(s) willing to go against the grain. Chris Toussaint, who produced *Free Energy: The Race to zero Point*, is the Executive Producer. Unlike all previous cold fusion documentaries — a few of them *great* and some of them *terrible* (e.g. "Confusion in a Jar," 1990) — this one-hour program will provide not only historical background to set the context of the science and the story, but also the indisputable evidence for cold fusion from laboratory data. Most important,

there will be on-camera, working devices.

Every indication is that the next few years will be an accelerating period of commercial development and growing scientific understanding of a technology that will transform the world—and liberate us from millennia in which the price of energy was paid for with blood and sweat. As they say, we are very privileged to live in "interesting times." 

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