

HOLTEC HIGHLIGHTS

A Summary Report to Our Clients, Suppliers, and Company Personnel

Latest Technical Breakthrough in the SMR-160 Program Holds the Promise of Collateral Benefit to Countless Power Plants

As our readers know, one key goal of our small modular reactor program (SMR-160), is to enable the reactor to be sited at water challenged locales. This goal can be met if, and only if, the plant's exhaust steam can be condensed by air, rather than water. The contemporary Air Cooled Condenser (ACC) technology unfortunately suffers from the critical limitation that the tubes carrying the steam must be made of carbon steel which severely limits the service life of the ACC.

We are pleased to announce that this technology limitation is no more. The ACCs can now be made with *stainless* steel tubes bonded to aluminum fins and thus be relied on to last for many decades. Bonding aluminum fins to stainless steel tube has been the proverbial "holy grail" of the ACC industry; we are thrilled to have found a practical and repeatable method to accomplish it. The attached brochure describes Holtec's ACC technology.

Holtec has filed a patent application with the United States Patent and Trademark Office and will soon seek worldwide patent rights for the innovative bonding technology.

Our SMR-160 nuclear reactor will now be offered with a stainless steel ACC option giving the power plant a long service life and the ability to operate in the most water parched areas of the world. The ACC with stainless steel tubes can also be used by existing plants, nuclear and non-nuclear, to reduce the dependency on water for condensing the exhaust steam. The figure below illustrates a "hybrid" cooling arrangement for SMR-160 (hybrid meaning using a combination of water and air) to reduce water consumption.

Holtec International has been engaged in the Small Modular Reactor Development program since January 2010. Over a dozen patent filings on SMR-160 have been made with many more innovations under active development. The SMR-160 is the industry's first reactor that does not require pumps or motors for any of the safety-related functions under normal operation or any conceivable accident condition.



SMR-160 with Hybrid Cooling



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