

Water Blocking and Reterminating at Sea of Flooded High Voltage Cable

Robert E. Lindberg, CEO

President & CEO, RELTEK

dbeesson@reltekllc.com 707 539-0539

Abstract: For years the underwater industry has sought ways to water block cable and connector systems. The basic premise is filling the voids in the cable with a moisture repellent compound and pressure compensating the cable in the process. An alternative is now been proven for water blocking cable terminations in an uncompensated cable. This breakthrough technology has now been tested and proven for the last four years to water block already flooded cables.

Menck, GmbH of Germany is the number one pile driving company of the world that contacted RELTEK, the producer of adhesives, sealants and coating for harsh environments and dissimilar materials to apply its BONDiT technology to solve an emergency operational breakdown.

The agreed design called for a water blocked cable splice to manage the cable size change and block the

water in the already flooded cable. Materials of the assembly included bonding and sealing to polyethylene wire insulation, EPDM cable jacket, urethane and PVC, HDPE high voltage pin insulators, Teflon connector insert, polyolefin shrink tubing, gold, nickel, solder and brass metals.

Within a few days the new design was successful using BONDiT A-3 primer for all the substrate and B-1 potting and adhesive compound for sealing and mechanical stability. The new termination system operated flawlessly while withstanding operation to 1,250 meters, mounted on a pile driver hammering sixteen 405 feet piles into the ocean floor. Menck was able to go online, operate and complete the job on schedule by implementing the BONDiT A-3 and B-1 cable termination system.