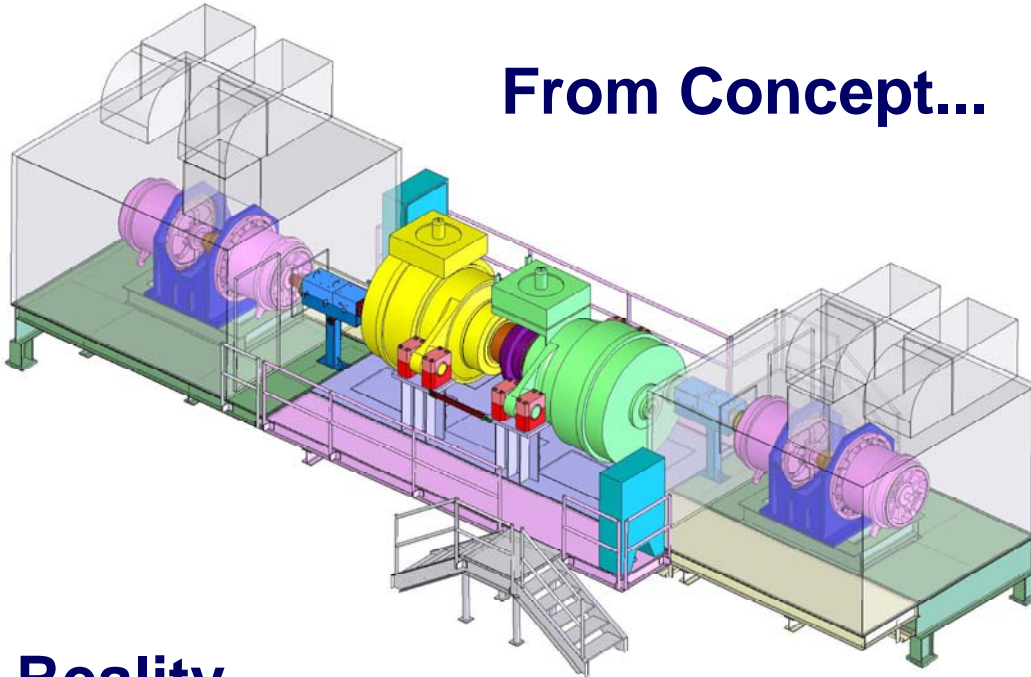




Emprise Corporation

Wind Turbine Gearbox Test Stands

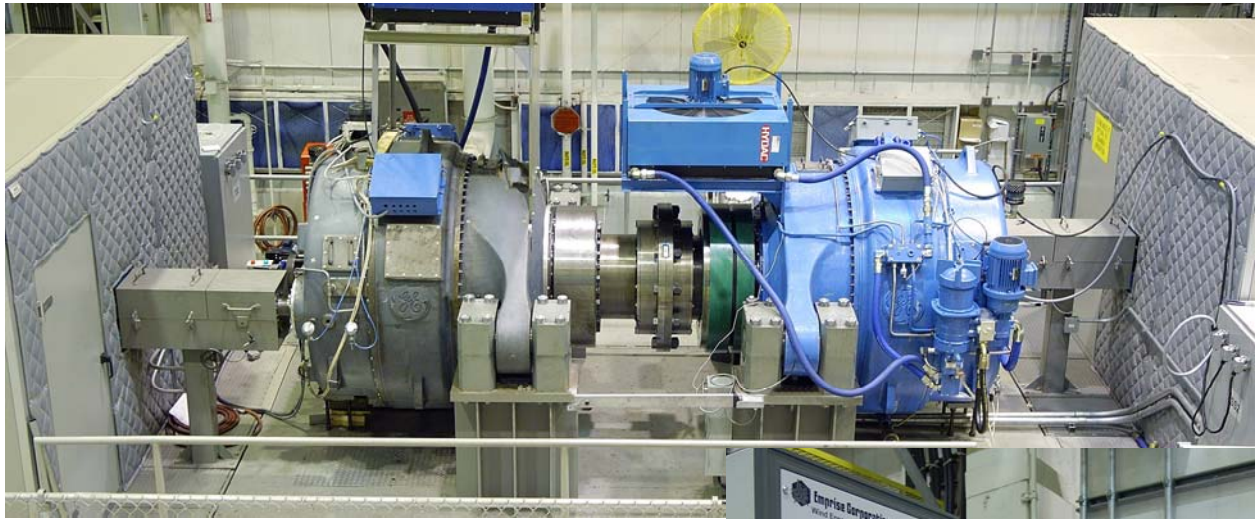
From Concept...



To Reality...



GE Wind Energy's Wind Turbine Main Gearbox Test Stand in Erie, PA was designed for post-overhaul testing of 1.5mW gearboxes. It allows GE engineers to determine vibration and acoustical characteristics as well as the verifying that the output speed and load requirements are within specifications.



The most critical technical issue for the gearbox test stand was simulating the wind turbine's 578,000 lb-ft torque at 18 rpm. The wind turbine gearbox is one of the few devices available with this duty rating. The solution was connecting the gearbox under test to an identical "slave" gearbox that runs in reverse and simulates the wind turbine torque. The test stand is driven and loaded by four AC traction motors and is fully regenerative to minimize energy consumption. The entire system is controlled by an Emprise developed LabView® Data System with Brejer & Kiel sound and vibration instrumentation.



From making Wind Turbines more reliable to making industrial gas turbines more efficient to developing alternative fuel power plants, Emprise provides a fully integrated turn-key solution for your entire test facility. Emprise engineers combine innovative design with the best in electrical and mechanical engineering to develop cost effective solutions. Emprise works with manufacturers of all type of utility power plants, including gas turbines, fuel cells and solar to successfully solve all kinds of testing problems.

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