ADRE* Goes to School

GE Donates ADRE system to Virginia Tech

John G. Winterton, North Region Bently Nevada Technical Leader, recently travelled to Blacksburg, Virginia to deliver an ADRE 408 Digital Signal Processing instrument (DSPi) and associated Sxp software that GE donated to Virginia Polytechnic Institute and State University. The university, also known as Virginia Tech, is one of the premier educational institutions in the United States teaching rotordynamics related curricula.

The 408 DSPi will specifically be used in the Engineering School Mechanical Engineering Department by Dr. Gordon Kirk, who has been at the institution since 1985 and a full Professor since 1991. Dr. Kirk teaches courses in Dynamic Systems, Vibrations, Engineering Design & Projects, and Introduction to Rotor Dynamics.

His undergraduate and graduate students are heavily involved in both analytical and experimental research of rotating machinery. To date, he has supervised 22 Master Degree students and 6 PhD students. Their major research work continues to be Computational Fluid Dynamics (CFD) Analysis of Labyrinth Seals, Experimental Evaluation of Turbocharger Stability (Figure 2) and Thermal Instability Design Analysis involving the Morton Effect.

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Figure 1: The new ADRE system is an upgrade from two old Bently Nevada* Digital Vector Filter 3 units (blue boxes on the top shelf), and an ADRE 208 Data Acquisition Interface Unit (DAIU) at the left end of the lower shelf.

Figure 2: Overhung turbocharger rotor is instrumented with XY proximity transducers and a phase reference/speed sensor.