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Instrumentation and Control Aspects of MgB₂ Current leads Test Activities

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Content :

As a part of an innovative engineering solution towards the current leads research and development program, MgB₂ current leads have been developed indigenously at IPR. The performance testing of current lead were mandatory as part of its validation. Experiment test facility developed with proper instrumentation and control system. A set of basic instrumentation viz. pressure, temperature, flow, level, vacuum gauge and voltage taps were incorporated in the test set-up. A final control element like control valves, heaters, vacuum pumps etc. used for safe and reliable operation of current lead. A PLC has been used for data acquisition and controls of the whole test set-up. The mimic for P, auto-manual interface, parameters trends and history trends, alarm pages using SCADA were developed in-house for the test. This paper describes the instrumentation setup and control aspects of MgB₂ based current lead test.

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