Abstract

In today’s industrial and research laboratories more applications are calling for control and data acquisition (DAQ) devices. Personal computers have become a primary tool in data acquisition with the development of hardware and software interfaces. Our paper is aimed at developing a control circuit for the torsion bar testing machine. The torsion bar testing machine is used to increase the resilience of the torsion bar i.e. to increase the elasticity of the torsion bar and as
well as to check the quality of the manufactured bar. The existing circuit for the torsion tester is designed to be compatible with the ISA bus of the main computer but in today’s modern world ISA bus has become obsolete with the introduction of the more efficient PCI bus and our project is aimed at designing a control circuit that is compatible with the PCI bus of the main system and also to reduce the circuit complexity. The main advantages of the PCI bus over ISA are high bandwidth and speed and no address conflict problems which helps in efficient operation of the machine. One part of the project involves in making PCI I/O card that is concerned with passing the control signal to the rotor and as well passing angular position of the rotor to the main system and the second part of project involves in designing the circuit that controls the rotor of the machine.

References

- Invited for demonstration of project “Reconfigurable Computing: An Experimental System using a PCI based Add-ON Card” at 17th International Conference on VLSI Design, 5-9 January 2004, Mumbai, India Stall sponsored by Xilinx Pvt. Ltd

Index Terms

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