SCHOOL OF ENGINEERING

DESIGN OF WIRELESS TORQUE TRANSDUCER

FINAL REPORT

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Abstract.

This paper reviews the work of the project **'Design of Wireless Torque Transducer'** which incorporated with strain gauges. There are several individual system combined to form this project. The system that mentioned is analog to digital converter, amplifier, and RF transmission module and also displays system. The important part in the project is using microcontroller to communicate within two systems, for example; it stand between the sensor and the transmitter, on the other hand it stand between the receiver and the display system. Therefore the following of this paper had describe and explain the use of microcontroller from **Microchip**, that is **PIC 16F877** and **PIC 16F84A**. Also discuss the wireless technology that applied to do the data transmission. Lastly is to investigate the uses of strain gauges in industrial field and how it applies in this project.

Although this approach is not a new invention and started use in industry since 1970. This project gives the flexibility to display to measurement directly on the receiver. It is an isolated with the machine and no requires any modification on the shaft of the machine. The receiver is made to be display the torque directly instead of connects to a computer to obtain it.