



Figure 18. Gas Sensor MQ-6

5) CONCLUSION

A sensor network based oil well remote health monitoring and intelligent control system was developed for Oil Pumping Unit management in the oilfield. This system consists of level sensor, temperature sensor and gas sensor for sensing the condition of the oil storage tank. The control head processes the sensor output values and controls the oil pumping motor accordingly. The control head transmits the condition of each oil well using a Zigbee transmitter. An administrator located in the Zigbee receiver side can monitor the oil wells using the X-CTU software and manual monitoring in oil wells would be avoided. When the oil storage tank is almost full, the oil pumping motor is shut down and there is no wastage of power. The condition of the oil well from a remote location is received at the zigbee receiver end and can be displayed using X-CTU software in the range of the wireless sensor network. In the future, the range of the wireless sensor network can be increased by increasing the operating power of the network. When the range of the wireless sensor network is increases, more number of oil wells can be monitored from a remote location and data transfer would occur with minimum power requirement.

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