

Application Note

Locking Load Indicator

Customer

Large scale cooker manufacturing company.

Customer Requirements

Detection of defects in manufacturing of cooker & differentiate these cookers on the basis of mechanical position of its handle.

Epsilon Solution

Control panel with microcontroller, LCD, lamps & fiber optic sensors.

System Features

Locking Load fixture i.e. platform for cooker.

Strong mechanical protection for fibers & overall system.

Data logging facility with easy user interface.

No laptop or pc required to monitor system.

LCD gives real time counts of online products.

Lamps & buzzer used for indications.

Counts can be reset.

Visit www.epsilonfiberoptics.com

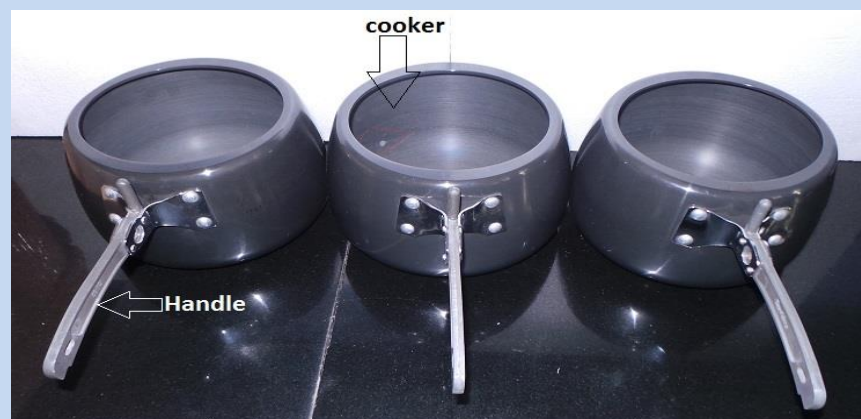


Locking Load Indicator system used to find out mechanical defects in cooker i.e. wrong angular position of cooker's handle.

Customer wants to differentiate his product on the basis of handle position on cooker. There are 3 possible results in operation i.e. OK, Undersize or Oversize.

If product comes under undersize or oversize category then it is a faulty product otherwise it is a pass product.

Customer also wants real time count display and data logging system so that they can monitor overall production in terms of quality and quantity.





On the basis of available information & customer requirements, Epsilon gives solution which includes 4 fiber optic sensors with control panel.

We have mounted three sensors for each condition. Also there is one loop control sensor.

Loop control sensor is multiuse sensor. This sensor detects the presence of cooker on platform and then only further procedure for detection of handle position is started.

Then we have mounted other 3 sensors in sequence for oversize, OK & undersize.

We have used LCD to display real time counts.

There is one push button which is used for 2 purposes - For reset counts we have to turn ON loop control sensor by obstructing its optical beam & then pressing this push button will reset counts.

By simply pressing this push button we can send out data from controller to laptop. In this data you will get all counts with date & time.

For data logging we have provided software that can take data in Microsoft excel of respective laptop.

Once you have installed this software connect laptop and controller with data USB cable and then select port number and data rate from software. Once connection has been established on each push button press you will get data on your laptop.