# Cost of Inaccurate Calibration

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**This exercise is to demonstrate the financial impact that calibration accuracy has on a business.**

**In this example the maximum flow rate through the system is 200 litres per minute of petrol. That equates to 288000 (10m) litres per day or approx 230 tonnes.**

**At present petrol costs approx £1.33 per litre, although the cost of production is about 50 pence/litre.**

**First of all, assume the instrument error is 0.5%**

Using graph 1, determine what the flow rate error is (l/min) when the flow is lower than 50 litres/hour. Calculate the cost to the firm, if the error is a negative one i.e. the instrument reads lower than actual and the product is basically given away.

Answer - _____ litre/day Cost £_____

Using graph 2, determine what the flow rate error is (l/min) when the flow is greater than 180 litres/hour. Calculate the cost if the error is a negative again.

Answer - _____ litre/day Cost £_____

**Repeat the above using an error of 3%**

Answer - _____ litre/day Cost £_____

Answer - _____ litre/day Cost £_____

What is 0.5% error in mA? _____

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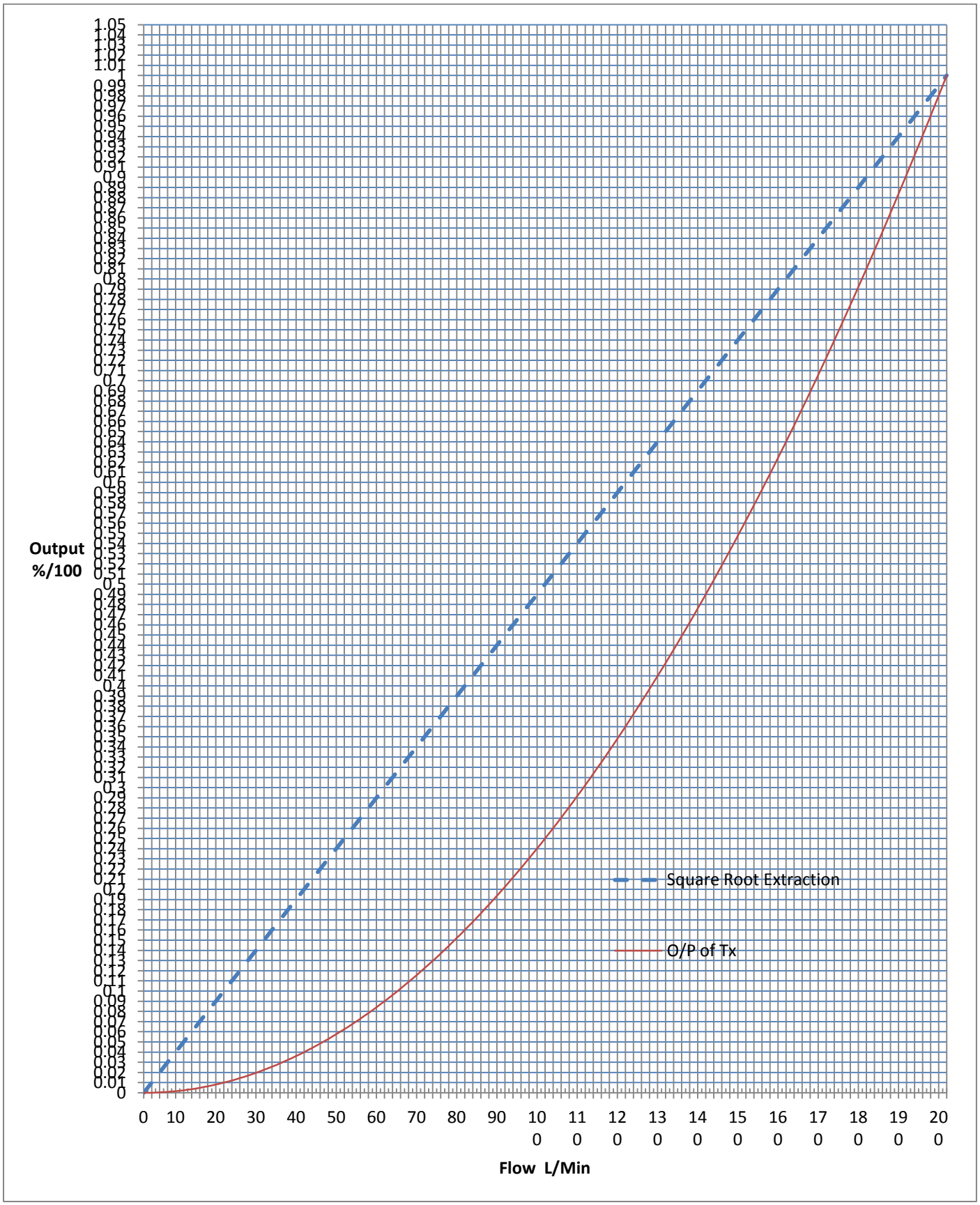

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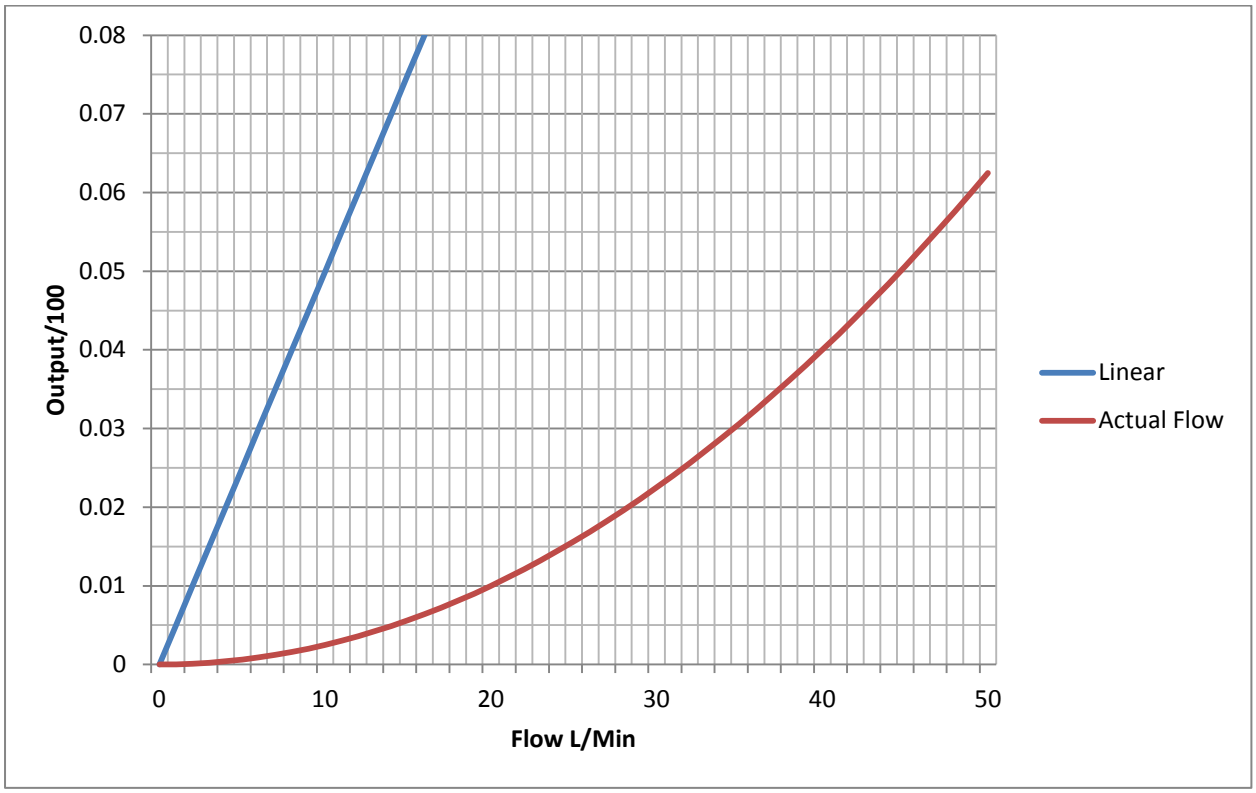
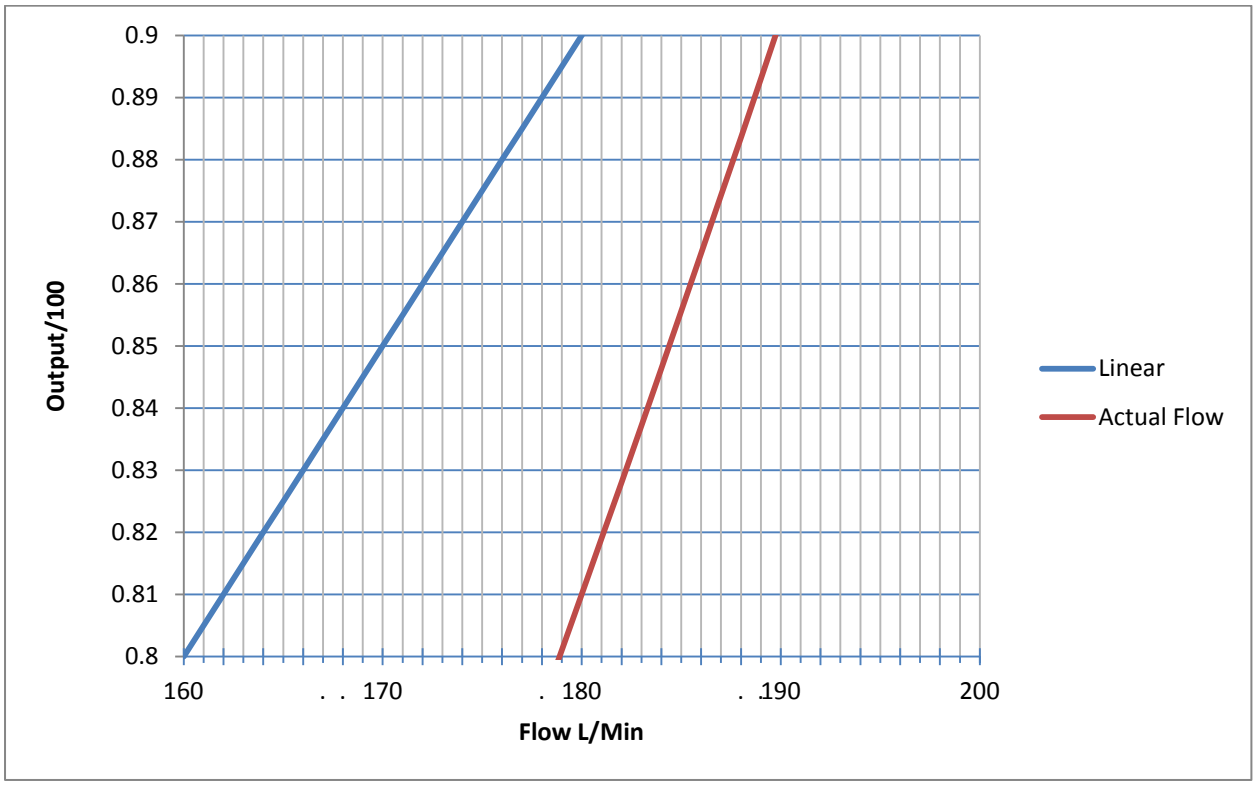



Graph 1




Graph 2