

Case Study – Abattoir

Design Information

The client is a large abattoir based near Stoke-on-Trent. In July 2011 after a successful trial and order of a Major Diaphragm Pump at another abattoir we were invited to tender for some pumps to meet the following requirements:

- Flow rate: 4l/s
- Pipe diameter: 100mm
- Medium: Blood transfer
- Delivery head: 20m
- Delivery run: 300m
- Dry solids: 1%
- Run time: Up to 8 hours/day
- Duty/standby

Order

The order was given at the beginning of August to proceed with delivery of the first pump at the end of September 2011. The second pump was ordered and delivered last year. They have also had a third pump for another process within their main facility.

Pump specifications

A 240mm Mallard Ram Pump was selected as being suitable for this application. The pump is running at 31rpm and has an installed power of 3kW.

Whole life costs

Energy Use

If pump is running 8 hours/day = 2920 hours/year

Assuming energy costs of 10p/kWhr, 1 pump costs 30p/hour to run

Running cost per year per pump = £876.00

Spares

Over the last few years the spares spend has been on replacement valves which are approx. £220.00 each

Parts cost per year per pump = £440.00