Advantage Controls Inc. — Data Sheet

Automation of Continuous Blowdown Using an

Advantage Control's Boiler Controller Yields Big Dollar Savings

System: One boiler, used for heat and process, generating 170,000 pounds of steam per day at 150 psig, with a 30% return of condensate; make-up water at 150 microSiemens/cm conductivity.

Before Automation: Manual control of blowdown achieving only 9 cycles of concentration, with poor control. Operator is forced to keep blowdown excessive to prevent scale deposition.

After Automation: Operating under good control at 15 cycles of concentration. Blowdown reduced by 6400 pounds daily; make-up water requirement reduced by 750 gallons daily.

1. Energy cost of excessive blowdown — **$1,573.00**
   The boiler can be safely operated nearer to the upper limit of TDS (Total Dissolved Solids) recommended by your water treatment expert. No matter how attentive the operator, manual control of blowdown subjects the boiler to wide swings in water quality, in order to stay safely below the upper limit (and protect against waterside deposits), manual control causes excessive blowdown

2. Energy losses due to scale deposition — **N/A**

3. Labor required for testing and blowdown adjustment. — **750.00**
   Because the blowdown operation is now automatic, the operator no longer has to make daily (or more frequent) tests of boiler water and consequent adjustments.

4. Water and sewerage charges. — **373.00**
   Under automation, excessive blowdown is eliminated and therefore less makeup water is consumed, and less waste water is put to the sewer.

5. Chemical Savings — **635.00**
   Because make-up water requirements are lessened, the use of treatment chemicals is proportionally reduced. Similarly, the cost of fuel treatment is reduced due to lower fuel consumption

Total Annual Savings — **$3,331.00**

Improvement in control with the Advantage Boiler Controller