



# Partnership Profiles

MALLINCKRODT

O&M Services

Turnkey Installation

Energy Services

System Solutions

**Site:** Mallinckrodt Chemical

**Location:** Raleigh, NC

**Scope of Work:** Armstrong Service developed, engineered, and installed (6) six Energy Conservation Projects at Mallinckrodt's Acetaminophen Facility.

The projects were financed by Armstrong Service over a 5-year term. Armstrong Service provides monthly engineering review and maintenance support for the heat recovery and steam distribution systems.



- Upgrade Projects:**
- Engineered and installed eleven (11) condensate contamination sensors/dump valves to dump condensate for boiler protection
  - Engineered and installed an automatic boiler blowdown system
  - Engineered and installed a D/A vent condenser
  - Engineered and installed air compressor heat recovery for boiler air preheat
  - Engineered and installed boiler oxygen trim controls
  - Implemented a steam trap optimization program

**Time of Service:** 5 year Engineering and Maintenance Term began in May 2000.

**Benefits:** Armstrong Service projected annual savings of \$364,000 for the projects, but Mallinckrodt was able to document in excess of \$500,000 in energy savings. Financing, provided by Armstrong Service, enables savings to immediately offset costs and eliminate a large capital outlay.

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