

## SIMULATION PROGRAMS FOR BASIC UNIT OPERATIONS

### **BASIC UNIT OPERATIONS – AUDY™ 5020**

The basic unit operations program consists of five (5) separate basic unit operations modules: heat exchanger, three-element boiler/feedwater control, variable speed centrifugal compressor, flash tank mixing, and variable speed centrifugal pump.

### **NATURAL DRAFT FIRED HEATER – AUDY™ 5030**

The balanced draft fired heater consists of two (2) main sections; a radiant section and a convection section. The fired heater operates with either fuel oil or fuel gas.

### **COMPRESSOR, TURBINE AND UTILITIES – AUDY™ 5060**

The compressor simulation program includes the centrifugal compressor with steam turbine drive, lube and seal oil systems, buffer gas system, vacuum system, and health monitoring system. Surge, stonewall, vibration, and trip logic are simulated.

### **SUPERHEATED STEAM GENERATOR – AUDY™ 5070**

The superheated steam generator burns either fuel oil or fuel gas that generates superheated steam. The boiler furnace is balanced draft design.

### **BALANCED DRAFT FIRED HEATER – AUDY™ 5110**

The balanced draft fired heater consists of a double-firebox, two-pass, balanced draft process heater having both radiant and convective tubes and forced and induced draft fans.

### **F.D. GAS-FIRED SUPERHEATED STEAM GENERATOR – AUDY™ 5160**

The forced draft superheated steam generator burns either fuel gas or fuel oil to generate superheated steam. The boiler furnace is forced draft design.

## ***BASIC UNIT OPERATIONS continued .....***

### **BASIC DISTILLATION OPERATIONS – AUDY™ 5190**

The basic distillation program contains two (2) independent distillation columns: a depropanizer and a debutanizer, each provided with similar related equipment: kettle-type reboilers, air fan condensers and reflux drums, as well as a process control/logic including automatic shutdowns.

### **INSTRUMENTATION TRAINING – AUDY™ 5900**

Includes six (6) modules that teach typical control concepts: Module 1: self-regulating process - gravity drained holding tank; Module 2: non-self-regulating process - pumped holding tank; Module 3: non-linear process – PH-mixing tank; Module 4: heat exchanger; Module 5: three-element control – boiler, and Module 6: process interaction effects - distillation column.