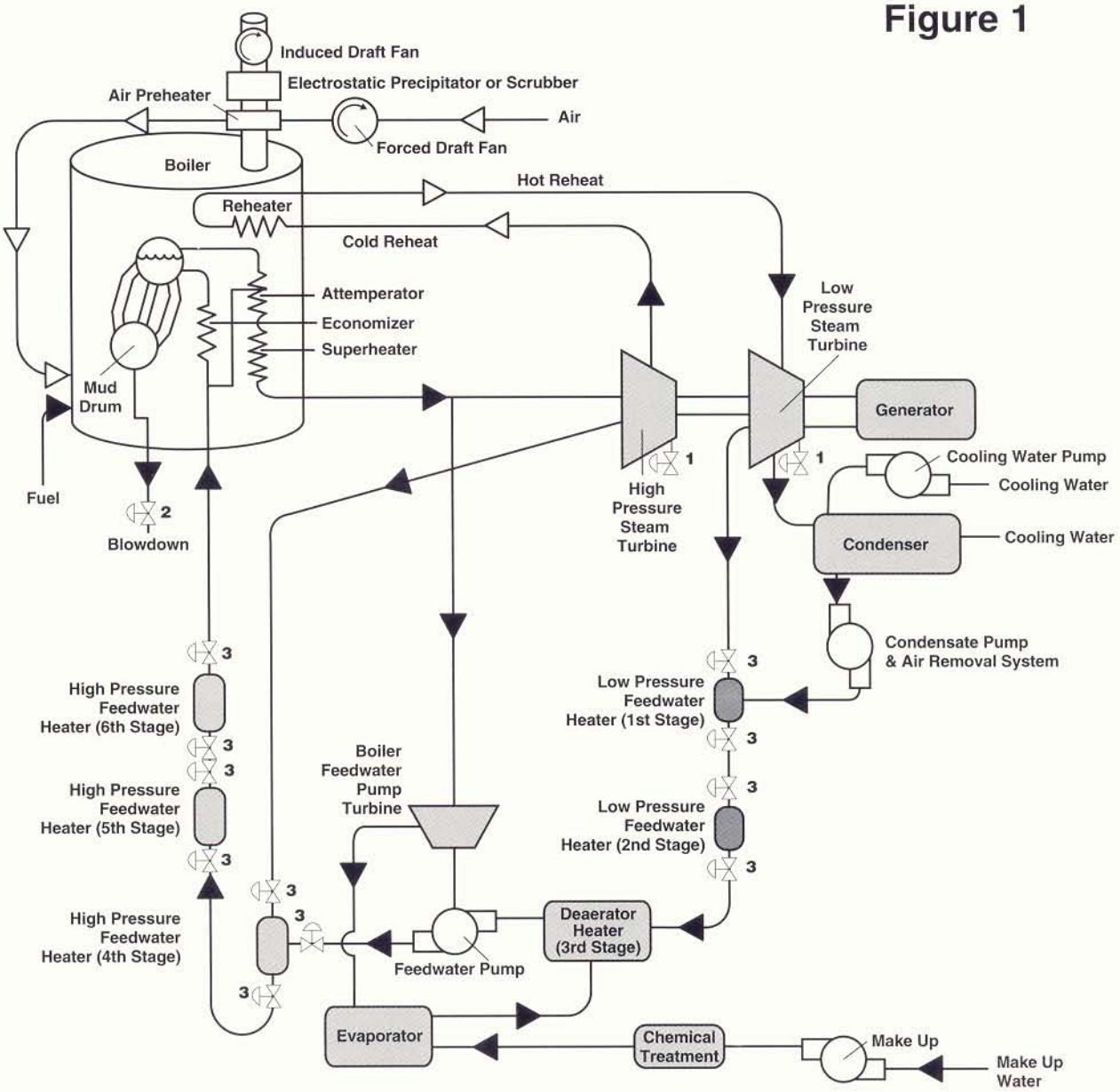
VALVTRON

Application Data

Typical Sub-Critical Power Plant

Figure 1



Metal-Seated Valve Applications

Valvtron has the ability to provide a wide range of metal-seated valve technologies into the Power Industry for Sub-Critical Power Plant utilization. Figure 1 illustrates a typical plant design for sub-critical service. Sub-Critical is defined as a power plant which generally operates at lower temperatures and pressures (650°F/2500psi) than those found in a Super-Critical facility. In general the Sub-Critical Power facility is considered less efficient that the Super-Critical. This typical plant design has numerous requirements and applications for metal-seated valve technology. Valvtron products have a well-established work history in providing products into this industry.

Figure 1 visually defines where typical Valvtron valves are normally used and on which service they are used. Table 1 provides further detailed information about each application and the general conditions surrounding that application. Valvtron applications are indicated with a 'numeric' reference.

The information presented in this application data sheet should not be considered all inclusive. It does provide a basic overview of a typical Sub-Critical Power plant and will function as an introduction to applications well suited for the Valvtron product line. If further information is required, the power industry manager for Valvtron or regional product specialist can provide further support.

Areas of Concentration

The following applications are specific areas of sales concentration where Valvtron has the greatest opportunity for immediate sales success. These areas include:

Table 1 - Valvtron Applications

Figure Location	Application	Typical Temperature	Typical Pressure	Typical Size	Suggested Valve	Suggested Body Material
1	Turbine Drain Lines	1000° - 1050°F	2100-2500 psi	1" - 2½"	Singltron	F - 22
2	Blowdown	600 - 700°F	2500-2600 psi	1" - 3"	Singltron	F - 22, C.S.
3	Feedwater Heater Isolation	500 - 600°F	2500 psi	8" - 18"	(V1)	C.S.

1. Turbine Drain
Each stage of the steam driven turbine has on/off valves used to exhaust the water and steam during startup. The valve is normally fully open during start-up to drain the water from the turbines. Once the water is drained and steam comes out, they are normally throttled back until the plant is fully operational.

2. Blow Down
When steam is used as the agent to clean boiler tubes, the valves serving this operation must be able to withstand both high pressures and high temperatures. Zero leakage performance is a requirement, but few manufacturers can provide a product that meets this application's needs. The Valvtron metal-seated ball valve is an ideal valve for this severe service.

3. Feedwater Isolation
These larger valves are used, in particular, to isolate high pressure feedwater heaters. In the meantime, the plant is running to repair broken or clogged tubes by removing the headers during non-peak times. This allows the plant to operate over longer periods between outages. The quarter-turn design allows for quick isolation during non-critical hours.

Note:
1. Applications listed in Table 1 are not all inclusive. Other applications are located throughout a power facility.
2. Valvtron products can be packaged with other Keystone product lines to provide a complete single source supplier approach.

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