

# Steam Generator

## Chapter 2.3



# Objectives

- 1.State the purposes of the steam generators.
- 2.Describe the primary and secondary flow paths through the steam generators.
- 3.Explain how dry saturated steam is produced by the steam generators.

# Objectives (Continued)

4. List the steam generator instrumentation inputs into the reactor protection system (RPS) and the engineered safety features (ESF) systems.
5. List the steam generator instrumentation inputs into the feedwater control system (FWCS).

# Purposes of the Steam Generators

1. To produce dry saturated steam for the turbine-generator and its auxiliary systems.
2. To act as a heat sink for the RCS during normal, abnormal, and emergency conditions
3. To provide a barrier between the radioactive RCS and the non-radioactive secondary system.

Figure 2.3-1 Steam Generator Secondary Side

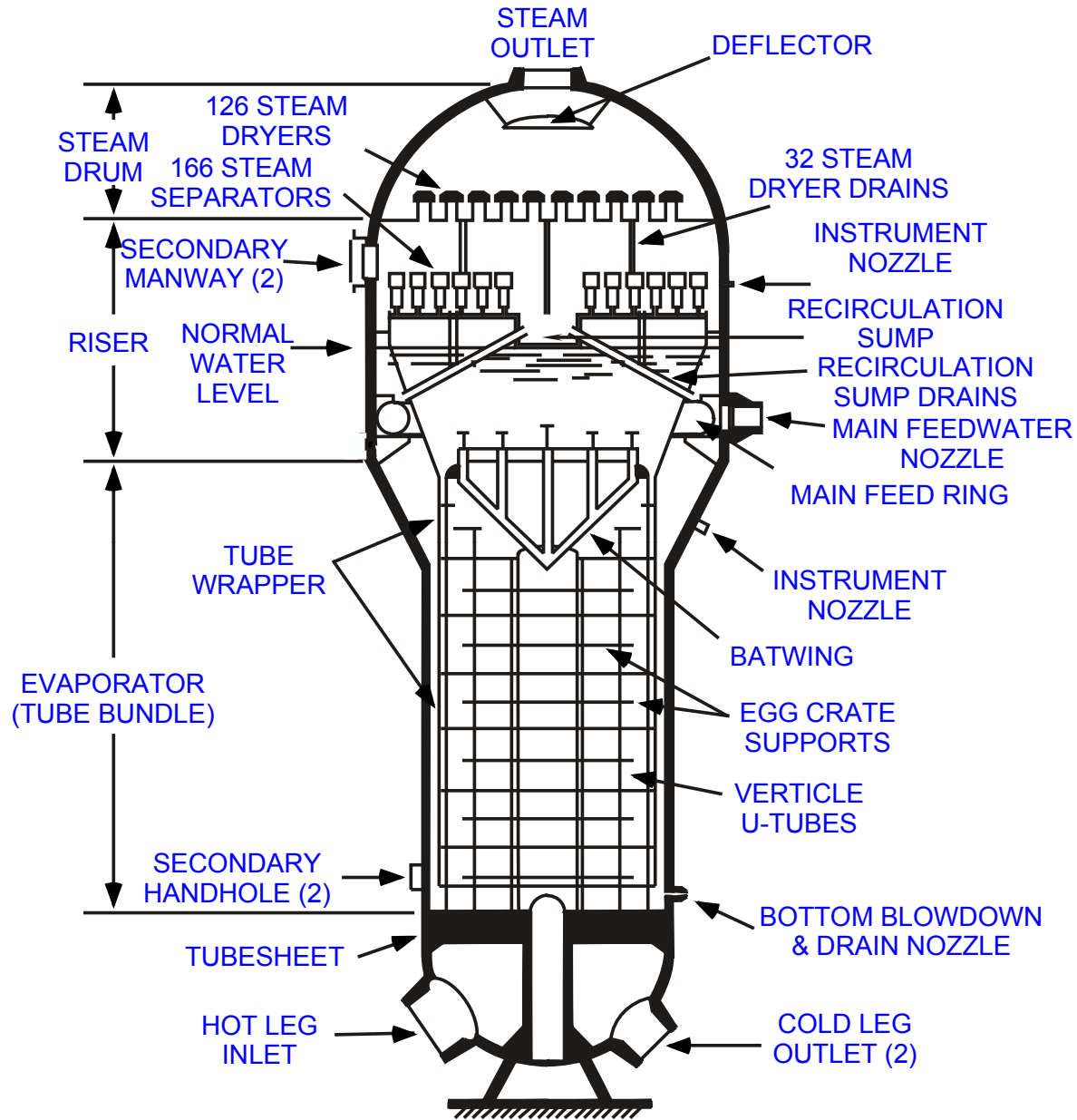


Figure 2.3-2 Steam Generator Eggcrate Tube Supports

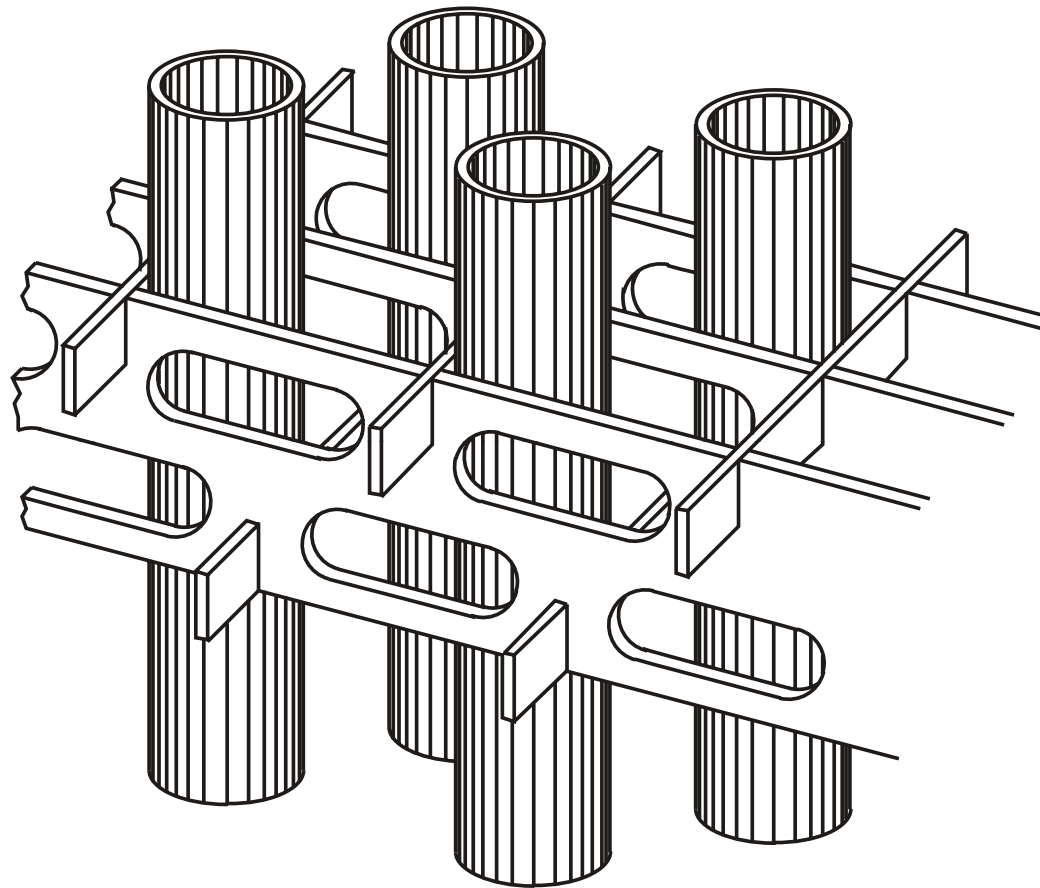


Figure 2.3-3 Bend Region Tube Supports

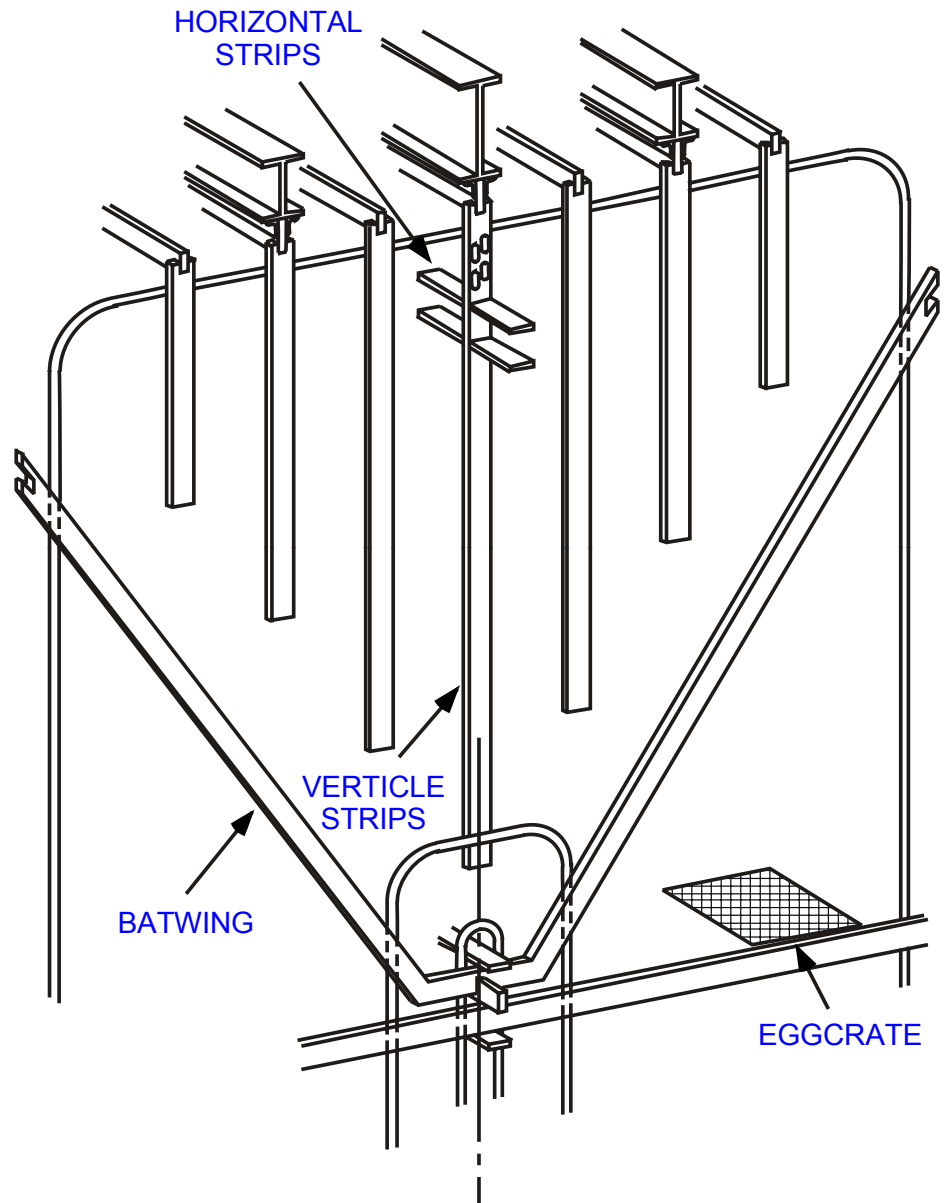


Figure 2.3-4 Batwings and Tube Supports

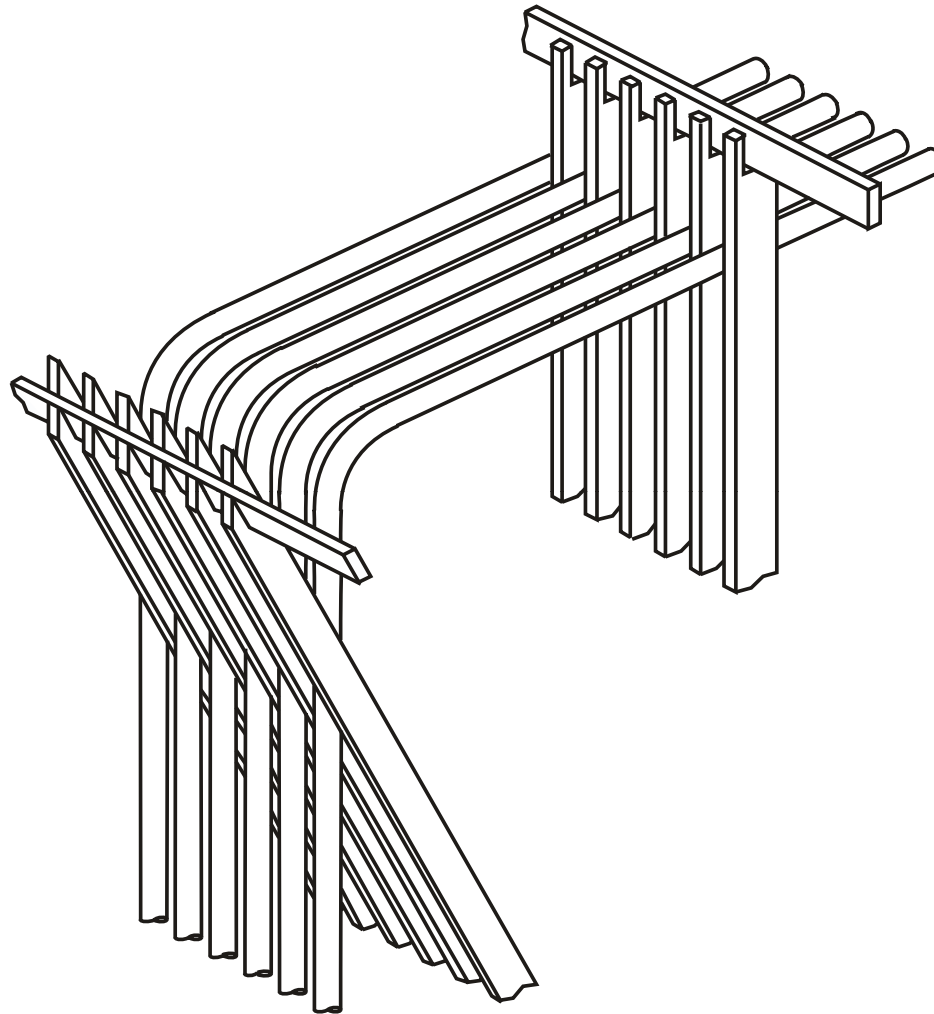




Figure 2.3-5 Cross-Section of Feed Ring Retrofitted with J-Tube

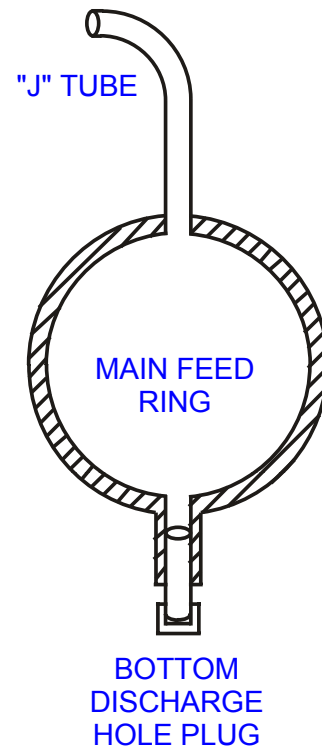


Figure 2.3-6 Centrifugal Steam Separators

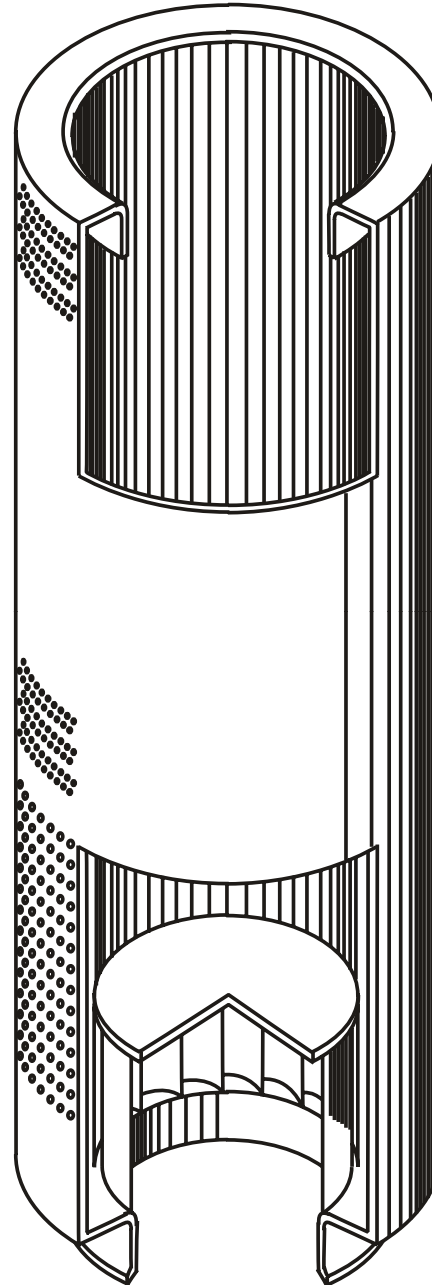


Figure 2.3-7 Chevron Steam Dryers

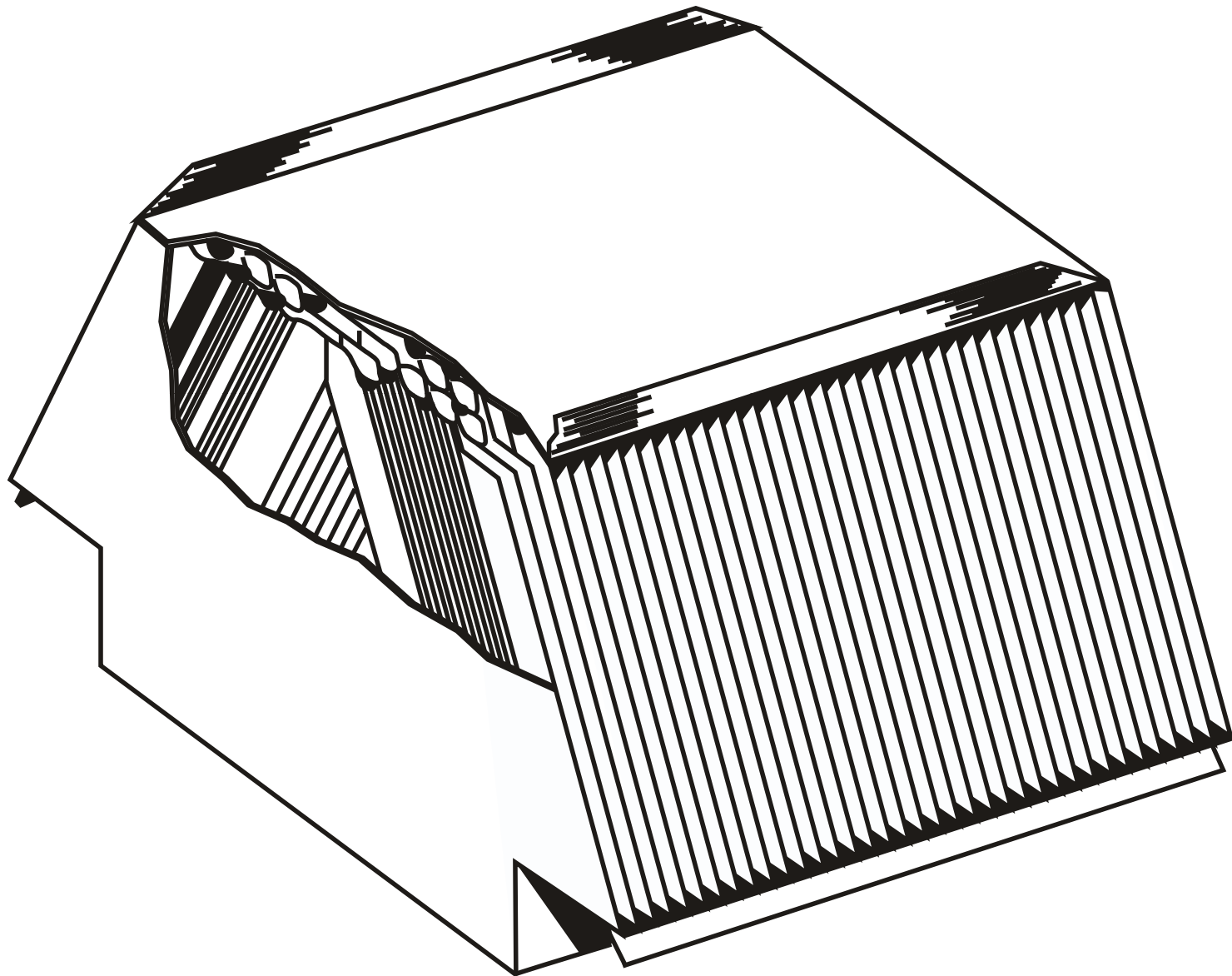


Figure 2.3-8 RCS Temperature Program

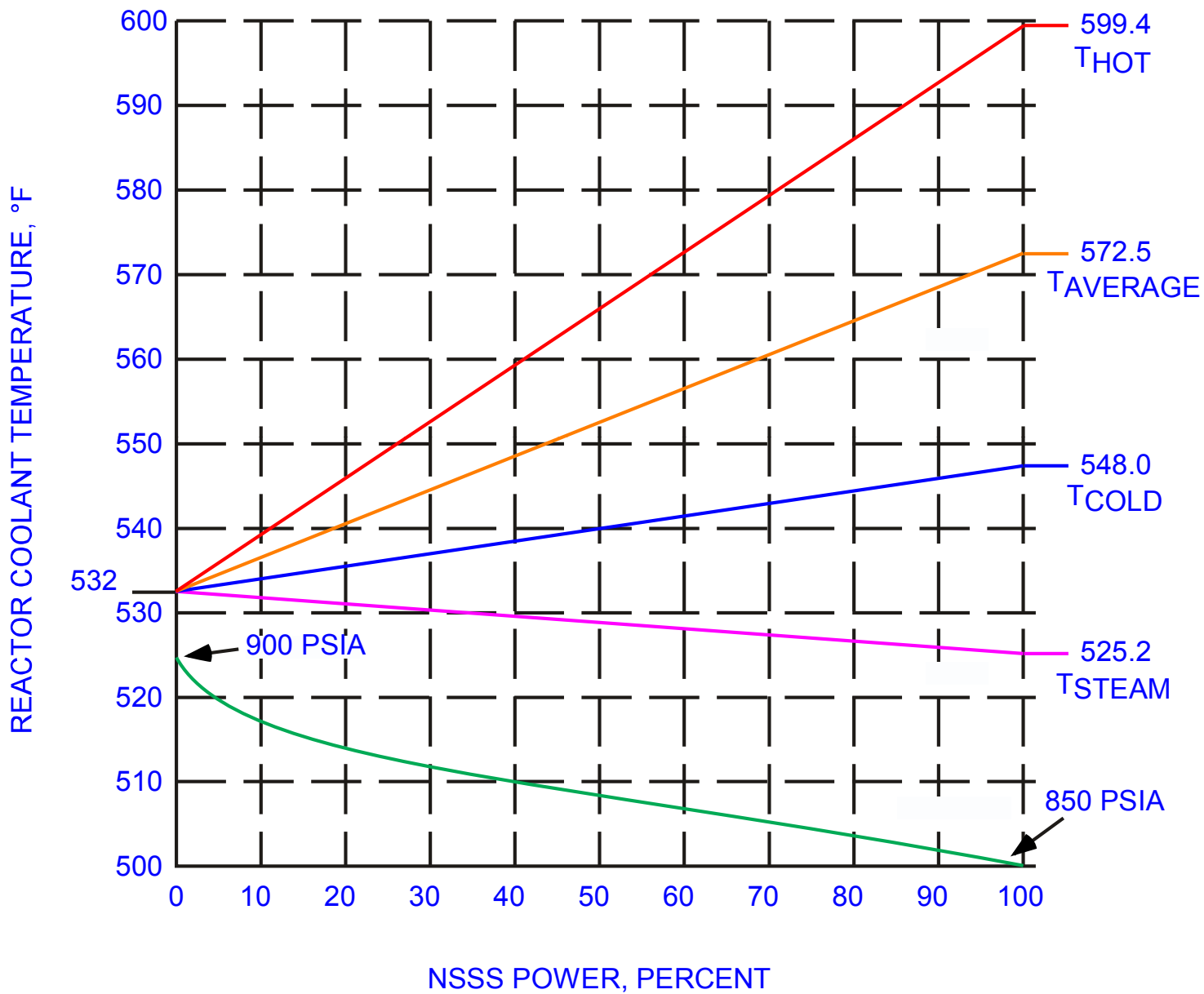


Figure 2.3-9 Steam Generator Blowdown and Recovery System

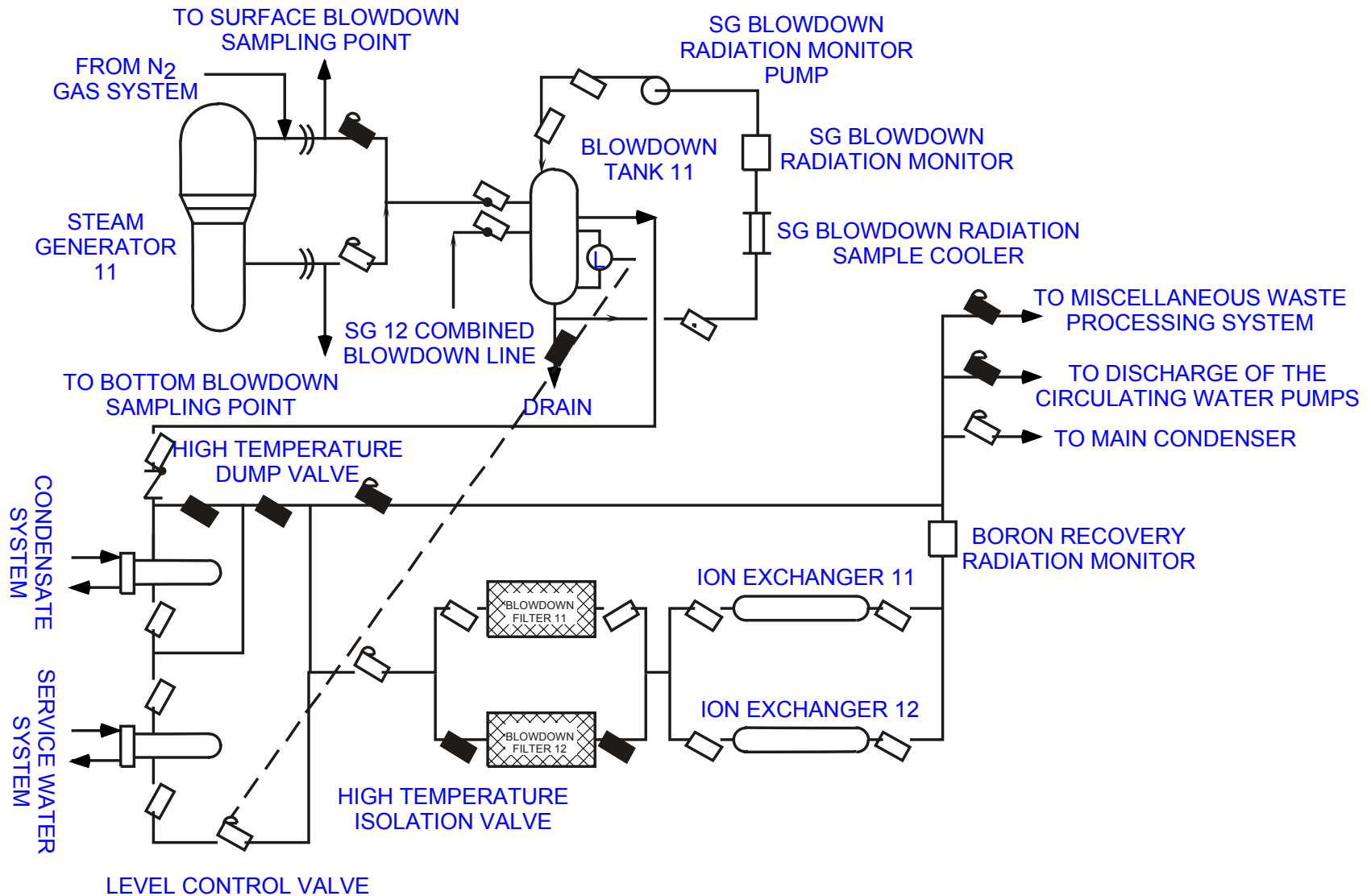
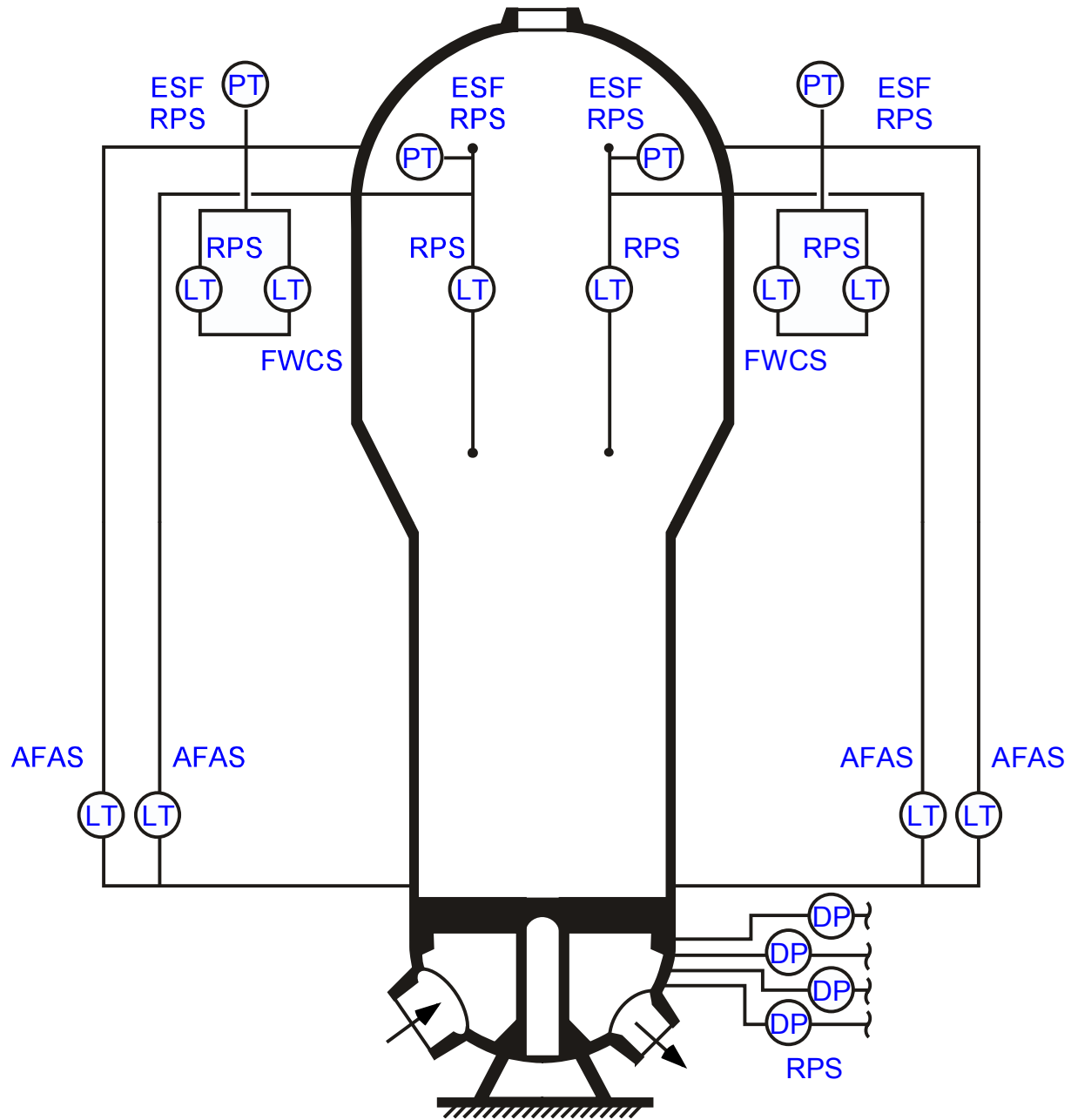


Figure 2.3-10 Steam Generator Instrumentation



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