

Westinghouse Technology Systems Manual

Chapter 10

PRIMARY SYSTEMS CONTROL AND INSTRUMENTATION

Section

10.1 Reactor Coolant Instrumentation

10.2 Pressurizer Pressure Control System

10.3 Pressurizer Level Control System

10.0 PRIMARY SYSTEMS CONTROL AND INSTRUMENTATION

Introduction

The purposes of primary instrumentation are as follows:

1. To monitor reactor coolant system (RCS) temperature, pressure, and flow and pressurizer level.
2. To provide inputs to the reactor protection system (RPS) for reactor trips, engineered safety features actuations, and protection-grade interlocks.
3. To provide inputs to various primary and secondary control systems.

Section 10.1 contains descriptions of instruments which measure the following parameters as well as the uses for their outputs:

- Temperature (10.1.1),
- Pressure (10.1.2),
- Level (10.1.3),
- Flow (10.1.4),
- Reactor vessel level (10.1.5), and
- RCS subcooling (10.1.6).

In addition, pressurizer pressure control (Section 10.2) and pressurizer level control (Section 10.3) are discussed.