

PART 1 - GENERAL

1.1 CLEANING AND START-UP OF MECHANICAL PIPING SYSTEMS

- .1 In accordance with Section 23 08 02 - Cleaning and Start-up of Mechanical Piping Systems.

1.2 HYDRONIC SYSTEMS - PERFORMANCE VERIFICATION (PV)

- .1 Perform hydronic systems performance verification after cleaning is completed and system is in full operation.
- .2 When systems are operational, perform following tests:
 - .1 Conduct full scale tests at maximum design flow rates, temperatures and pressures for continuous consecutive period of 48 hours to demonstrate compliance with design criteria.
 - .2 Verify performance of hydronic system circulating pumps as specified, recording system pressures, temperatures, fluctuations by simulating maximum design conditions and varying.
 - .1 Pump operation.
 - .2 Boiler and/or chiller operation.
 - .3 Pressure bypass open/closed.
 - .4 Control pressure failure.
 - .5 Maximum heating demand.
 - .6 Boiler and/or chiller failure.

1.3 REPORTS

- .1 In accordance with Section 01 91 13 - General Commissioning Requirements: Reports, supplemented as specified herein.

1.4 TRAINING

- .1 In accordance with Section 01 91 13 - General Commissioning Requirements: Training of O&M Personnel, supplemented as specified herein.

PART 2- PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION