Data Points

Supervisory control and data acquisition (SCADA) system typically consist of data elements called points (or tags), where each point represents a single variable measured or controlled by the system.

The HAI dataset includes the critical data points to control and monitor at a centralized place. The HAIEnd dataset, however, internal points used in DCS logics to control the boiler process.

HAI DATA POINTS

As the HAI version becomes more recent, the number of data points are increases from 59 to 86. All data points of each version are tabulated below.

Range

HAI

No

Name

Unit

Description

22.04

Min

Max

20.07

21.03

23.05

1

P1_B2004

0

10

bar

Heat-exchanger outlet pressure setpoint

2

P1_B2016

0

10

bar

Pressure demand for thermal power output control

3

P1 B3004

0

720

mm

Water level setpoint (return water tank)

4

P1_B3005

0

2,500

l/h

Discharge flowrate setpoint (return water tank)

5

P1_B4002

0

100

°C

Heat-exchanger outlet temperature setpoint

6

P1_B4005

0

100

%

Temperature PID control output

7

P1_B400B

0

2,500

l/h

Water outflow rate setpoint (heating water tank)

8

P1_B4022

0

40

°C

Temperature demand for thermal power output control

9

P1_FCV01D

0

100

%

Position command for the FCV01 valve

10

P1_FCV01Z

0

100

%

Current position of the FCV01 valve

11

P1_FCV02D

0

100

%

Position command for the FCV02 valve

12

P1_FCV02Z

0

100

%

Current position of the FCV02 valve

13

P1_FCV03D

0

100

%

Position command for the FCV03 valve

14

P1_FCV03Z

0

100

%

Current position of the FCV03 valve

15

P1_FT01

0

2,500

mmH2O

Measured flowrate of the return water tank

16

P1_FT01Z

0

3,190

l/h

Water inflow rate converted from P1 FT01

17

P1_FT02

0

2,500

mmH2O

Measured flowrate of heating water tank

18

P1_FT02Z

0

3,190

l/h

Water outflow rate conversion from P1_FT02

19

P1_FT03

0

2,500

mmH2O

Measured flowrate of the return water tank

20

P1_FT03Z

0

3,190

l/h

Water outflow rate converted from P1_FT03

21

P1_LCV01D

0

100

%

Position command for the LCV01 valve

22

P1_LCV01Z

0

100

%

Current position of the LCV01 valve

12