WATER TREATMENT CONTROL

The SIMATIC S7 PCL used for the water treatment control has one feedback loop that controls the water level in the upper reservoir.

Pumping/releasing

P4-HTM

demand

P3-LC

LT

PIT

FIT

01

01

01

Upper Water Tank

LCV01

Lower Water Tank

LCP01

FIGURE 12. WATER TREATMENT PROCESS CONTROL ARCHITECTURE.

P3-LC: Level Control

P3-LC controls the level control valve (LCV01) and level control pump (LCP01) by adjusting the discharge and pumping demands of the HIL simulator.

Discharge

demand

LCV01

F()

LH01

Water

LT01

P4-HTM

Function

Pumping

Saturation Rate Limiter

treatment

LL01

demand

LCP01

(P3)

F()

Function Saturation Rate Limiter

P3-Level Control (LC)

FIGURE 13. WATER LEVEL CONTROL IN A WATER TREATMENT PLANT.

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