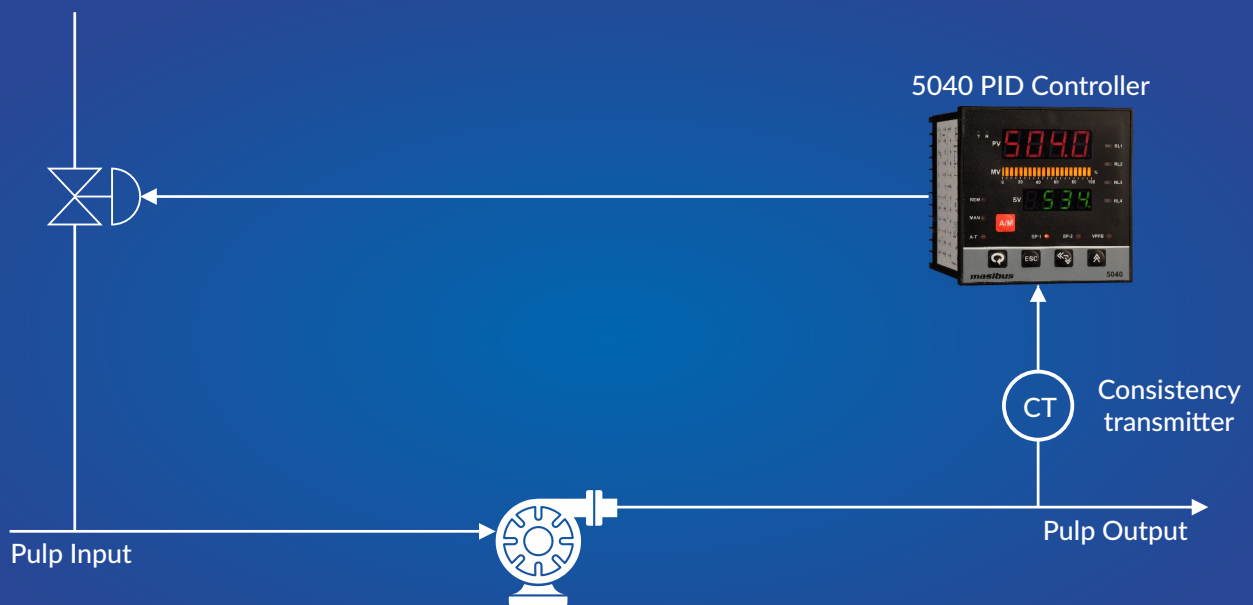


## 5040 PID CONTROLLER FOR PULP CONSISTENCY CONTROL



### Pulp Consistency Control

#### APPLICATION NOTE:

##### 5040

The figure shows pulp consistency control wherein water flow is controlled directly by PID controller 5040. In this method the output of Consistency Transmitter is connected to PID 5040 Controller for consistency control and output of Controller will control the water flow.

Based on the stability of the stock flow and the dilution water supply, different control strategies can be implemented that includes feed forward, feedback, cascade and combination of cascade and feed forward.

There are several ways with which one can satisfy the control strategy objectives for the different types of consistency processes and at the same time, avoid many of the potential problems.

## DESCRIPTION

Maintaining the pulp consistency is a key product parameter in the paper industry. Paper industry requires consistent supply of desired mixtures of fibers, chemicals and water for paper making process and hence it becomes important to control the consistency. If it is outside the desired range the outcome produced will not meet the required specifications.

Consistency affects the operations of the system significantly impacting both product quality and machine runnability.

Consistency is usually controlled by adjusting the dilution water flow using PID controller.

### Applications of Consistency controls:

- Agitation and mixing
- Batch pulper
- Dilution Control

### Benefits

- Reduced wastage and scrap
- Optimization of throughput resulting in increased production
- Improved process reliability
- Reduced product variability