FroMinent Fluid Controls	
Application	Bulgin
February 1999	Volume 99 - 1
Determining whether a system can be controlled	

Can the system be controlled? How can you determine the ease or difficulty of controlling a system? That is the question you must answer when designing or upgrading an application. You can answer this question with the follow equation

If <u>TU</u> is < 0.1 the system TG between 0.1 and

< 0.1 the system is easily controllable

between 0.1 and 0.3 the system is controllable > 0.3 the system is difficult to control

TU = the time in seconds, from the start of manual chemical dosing until the chemical is sensed by the monitor. Distance of velocity lag in seconds. (Be sure that the system is not being controlled.)

TG = the time in seconds, for the measured value to stabilize after the chemical is sensed. Compensating time in seconds.

TU is affected by the reaction of the chemical with the media being treated, the distance the monitor is from the injection point and the size of the piping.

TG is affected by the reaction time of the chemical with the media being treated and the reaction time of the sensor and monitor.

Typical System

TG

Х

Y

TU