

ANSWER KEY - LABORATORY EXERCISE 13 USING SCHEDULED TUNING

2.0 INITIAL TUNING

2.2 Tuning for Base Conditions

Process Flow: 75 m3/hr Gain: 6.0 Reset: 6.67 min/rpt

2.3 Other Operating Points

Load at 95% of full scale. How does this response compare...? Sluggish

Load at 55% of full scale. How does this response compare...? Too aggressive

2.4 Tuning for Other Operating Points

Process Flow: 55 m3/hr Gain: 4.0 Reset: 7.0 min/rpt

Process Flow: 95 m3/hr Gain: 8.0 Reset: 5.0 min/rpt

2.5 Calculate Tuning Schedule

Region 1 Gain Multiplier: 0.67

Region 1 Reset Multiplier: 1.05

Region 3 Gain Multiplier: 1.33

Region 3 Reset Multiplier: 0.75

Region	Low	High	Gain Multiplier	Min/Rpt Multiplier	Deriv Multiplier
1	0	65	0.67	1.05	1.0
2	65	85	1.0	1.0	1.0
3	85	100	1.33	0.75	1.0

2.6 Testing of Scheduled Tuning

Whatever you decided to do in this section. (How about observing “AutoLoad” with scheduled tuning ON, then scheduled tuning OFF?)