

Operating Mode 1 - "Sweetening" Only

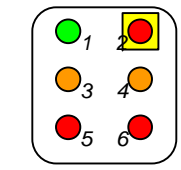
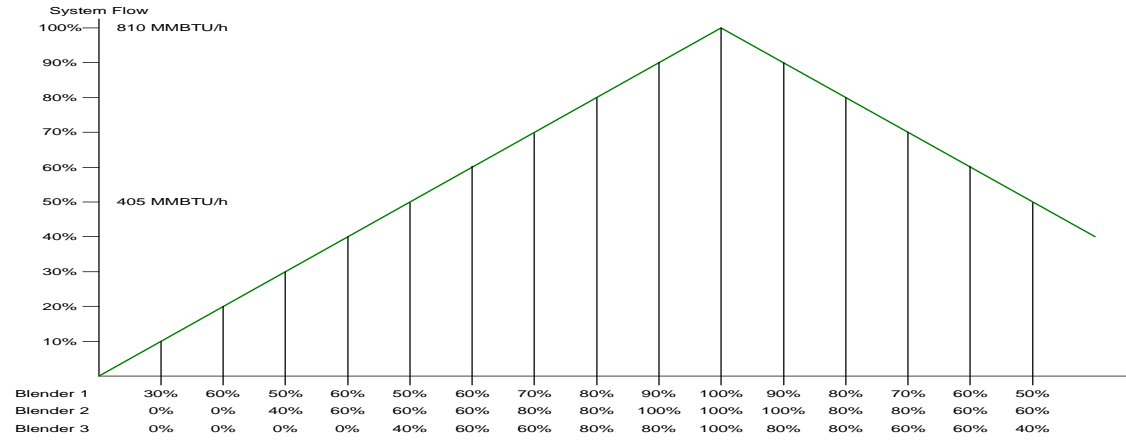
Condition: COG pressure is above adjustable Setpoint
 Feedback: Gas Properties from external Analyzer

Blender 1	NatGas Inlet	OPEN		
	Air Inlet	CLOSED		
	Positioner	Center-Position (NatGas Port 100% Open)		
	Control Valve	PLC controls opening (= injection of straight NatGas) until gas properties match adjustable Setpoint.		
Blender 2	OFF		Blender 3	OFF

Operating Mode 2 - Flow Augmentation and "Sweetening"

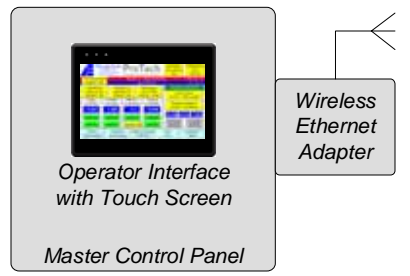
Condition: COG pressure is below adjustable Setpoint
 Feedback: Gas Properties from external Analyzer
 COG Pressure from external Transmitter

Blender 1	NatGas Inlet	OPEN		
	Air Inlet	OPEN		
	Positioner	Position is changed until gas properties match adjustable Setpoint.		
	Control Valve	PLC opens Control Valve in 10%-steps to increase/maintain adjustable COG line pressure. When Control Valve position at Blender 1 reaches 60%, Blender 2 is brought online with 20% Control Valve opening; Control Valve opening at Blender 1 is reduced accordingly. Control Valve openings at Blender 1 and Blender 2 are adjusted in 10%-steps until both are at 60%. At this point, Blender 3 is started with 40% Control Valve opening. Control Valve opening at Blender 1 is reduced accordingly.		
Blender 2	NatGas Inlet	OPEN		
	Air Inlet	OPEN		
	Control Valve	see above and graphic		
Blender 3	NatGas Inlet	OPEN		
	Air Inlet	OPEN		
	Control Valve	see below and graphic		



- Skid-Mounted Control Panel**
- 1 - Control Power ON/OFF
 - 2 - ESD Mushroom Button
 - 3 - Inlet Valves Open/Close
 - 4 - Blender Start/Stop
 - 5 - Alarm Silence
 - 6 - Alarm Reset

NOTE:
 Blender can be operated through push buttons at local Start/Stop Station, or through the touch screen in the Master Control Panel, or remotely.



NOTE:
 Remote access for monitoring and control via Ethernet is standard. UL 508a stamp for panel available.

- [P] Pressure Transmitter
- [G] Pressure Gauge
- [T] Temperature Gauge

#	DATE	REVISION DESCRIPTION	DRAWN	APPRVD
Alternate Energy Systems, Inc.				
	DATE: 14-AUG-10	SCALE: NTS	DRAWN BY: WHD	APPROVED BY: n/a
	TITLE: CokeOvenGas Augmentation/Sweetening/Replacement System			
	REVISION NUMBER: Revision # 0	DRAWING FILE: Triple_Blender_Config_BlockDiagram_14Aug10.vsd		