

PROJECT NO.:		SYSTEM OUTPUTS		SYSTEM INPUTS		SYSTEM SOFTWARE/CONTROL		PAGE: 1	
BUILDING: 320		BINARY	ANALOG	BINARY	ANALOG	ALARM PROCESSING	APPLICATION/FUNCTION		
SYSTEM:									
BOILER BFT1									
SYSTEM COMPONENT:		ELECTRIC DEVICE	START/STOP	OPEN/CLOSE	SPEED COMMAND	VALVE POSITION	DAMPER POSITION	STATUS	ALARM
STATUS									
BURNER									
FORCED DRAFT FAN									
DIFFERENTIAL PRESSURE									
VARIABLE FREQUENCY DRIVE (VFD)									
VFD FAULT									
VOLTAGE A to B									
VOLTAGE B to C									
VOLTAGE C to A									
VOLTAGE A to N									
VOLTAGE B to N									
VOLTAGE C to N									
COMBUSTION AIR									
OUTSIDE AIR DAMPER									
OUTSIDE AIR DAMPER - OPEN									
FILTER									
STEAM CONTROL VALVE									
SUPPLY AIR TEMPERATURE									
BOILER STEAM PRESSURE									
BOILER STEAM FLOW (SFM1)									
BOILER STACK TEMPERATURE									
LEAVING ECONOMIZER TEMPERATURE									
ECONOMIZER ENTERING WATER TEMP.									
ECONOMIZER LEAVING WATER TEMP.									
ECONOMIZER AIR DELTA TEMP.									
ECONOMIZER WATER DELTA TEMP.									
FLUE GAS RECIRCULATION									
FLOW									
DAMPER POSITION									
AIR COMPRESSOR (integral)									
FUEL PUMP (integral)									
ECONOMIZER STACK DAMPER									
OXYGEN									
NOX									
CARBON MONOXIDE									
EXCESS AIR									
WATER LEVEL									
AUXILIARY WATER LEVEL									
BLOWDOWN CONTROL VALVE CV-9									
BOILER NATURAL GAS FLOW (NGFM1)									
BOILER FUEL OIL FLOW (OFM3)									
BOILER 2-WAY FUEL OIL VALVE									
BOILER 3-WAY FUEL OIL VALVE									
LP GAS IGNITER PILOT (in use)									
PRESSURE									
STATUS - First out alarm annunciation for each of the following interlocks:									
FLAME FAILURE									
PURGE AIRFLOW LOW									
COMBUSTION AIRFLOW LOW									
FALSE COMBUSTION AIR									
HIGH MAIN GAS PRESSURE (at gas train)									
LOW MAIN GAS PRESSURE (at gas train)									
HIGH OIL PRESSURE (at fuel train)									
LOW OIL PRESSURE (at fuel train)									
LOW IGNITER PILOT GAS PRESSURE									
FUEL SAFETY SHUTOFF VALVES NOT CLOSED PRIOR TO IGNITION CYCLE									
LOW FIRE POSITION NOT ATTAINED PRIOR TO IGNITION CYCLE									
LOW ATOMIZING MEDIA STATIC PRESSURE AT ATOMIZING MEDIA									
SERVICE CONNECTION TO BURNER PIPING									
LOW ATOMIZING OIL DIFFERENTIAL PRESSURE									
LOW WATER CUTOFF									
LOW/LOW WATER CUTOFF									
LOW WATER CUTOFF RESET									
LOW ATOMIZING AIR PRESSURE									
FLUE GAS RECIRCULATION IMPROPER DAMPER POSITION									
LOW FLUE GAS OXYGEN									
HIGH STEAM PRESSURE CUTOFF									
HIGH/HIGH STEAM PRESSURE CUTOFF									
Alarm annunciation, safety shutdown and manual reset required for:									
FLAME SIGNAL DETECTED PRIOR TO IGNITION CYCLE									
PRE-IGNITION INTERLOCK OPEN DURING PRE-PURGE									
HIGH FIRE PURGE INTERLOCK FAILS TO CLOSE									
LOW FIRE PURGE INTERLOCK FAILS TO CLOSE									
IGNITER (PILOT) FAILS TO IGNITE									
MAIN BURNER FAILS TO IGNITE									
MALFUNCTION OF FLAME DETECTOR									
MALFUNCTION OF PROGRAMMER									
MALFUNCTION OF FLAME SIGNAL AMPLIFIER									
COMBUSTION AIR PROVING SWITCH ACTUATED PRIOR TO START-UP OF FORCED DRAFT FAN									
LOCK-OUT INTERLOCK OPEN DURING PRE-PURGE									
LOCK-OUT INTERLOCK OPEN DURING IGNITION									
LOCK-OUT INTERLOCK OPEN DURING RUN PERIOD									
INTERLOCK OPEN									
FLAME FAILURE									

1 POINTS LIST FOR BOILER BFT1

NTS

PROJECT NO.:		SYSTEM OUTPUTS		SYSTEM INPUTS		SYSTEM SOFTWARE/CONTROL		PAGE: 2	
BUILDING: 320		BINARY	ANALOG	BINARY	ANALOG	ALARM PROCESSING	APPLICATION/FUNCTION		
SYSTEM:									
BOILER BFT2									
SYSTEM COMPONENT:		ELECTRIC DEVICE	START/STOP	OPEN/CLOSE	SPEED COMMAND	VALVE POSITION	DAMPER POSITION	STATUS	ALARM
STATUS									
BURNER									
FORCED DRAFT FAN									
DIFFERENTIAL PRESSURE									
VARIABLE FREQUENCY DRIVE (VFD)									
VFD FAULT									
VOLTAGE A to B									
VOLTAGE B to C									
VOLTAGE C to A									
VOLTAGE A to N									
VOLTAGE B to N									
VOLTAGE C to N									
COMBUSTION AIR									
OUTSIDE AIR DAMPER									
OUTSIDE AIR DAMPER - OPEN									
FILTER									
STEAM CONTROL VALVE									
SUPPLY AIR TEMPERATURE									
BOILER STEAM PRESSURE									
BOILER STEAM FLOW (SFM2)									
BOILER STACK TEMPERATURE									
LEAVING ECONOMIZER TEMPERATURE									
ECONOMIZER ENTERING WATER TEMP.									
ECONOMIZER LEAVING WATER TEMP.									
ECONOMIZER AIR DELTA TEMP.									
ECONOMIZER WATER DELTA TEMP.									
FLUE GAS RECIRCULATION									
FLOW									
DAMPER POSITION									
AIR COMPRESSOR (integral)									
FUEL PUMP (integral)									
ECONOMIZER STACK DAMPER									
OXYGEN									
NOX									
CARBON MONOXIDE									
EXCESS AIR									
WATER LEVEL									
AUXILIARY WATER LEVEL									
BLOWDOWN CONTROL VALVE CV-10									
BOILER NATURAL GAS FLOW (NGFM2)									
BOILER FUEL OIL FLOW (OFM4)									
BOILER 2-WAY FUEL OIL VALVE									
BOILER 3-WAY FUEL OIL VALVE									
LP GAS IGNITER PILOT (in use)									
PRESSURE									
STATUS - First out alarm annunciation for each of the following interlocks:									
FLAME FAILURE									
PURGE AIRFLOW LOW									
COMBUSTION AIRFLOW LOW									
FALSE COMBUSTION AIR									
HIGH MAIN GAS PRESSURE (at gas train)									
LOW MAIN GAS PRESSURE (at gas train)									
HIGH OIL PRESSURE (at fuel train)									
LOW OIL PRESSURE (at fuel train)									
LOW IGNITER PILOT GAS PRESSURE									
FUEL SAFETY SHUTOFF VALVES NOT CLOSED PRIOR TO IGNITION CYCLE									
LOW FIRE POSITION NOT ATTAINED PRIOR TO IGNITION CYCLE									
LOW ATOMIZING MEDIA STATIC PRESSURE AT ATOMIZING MEDIA									
SERVICE CONNECTION TO BURNER PIPING									
LOW ATOMIZING OIL DIFFERENTIAL PRESSURE									
LOW WATER CUTOFF									
LOW/LOW WATER CUTOFF									
LOW WATER CUTOFF RESET									
LOW ATOMIZING AIR PRESSURE									
FLUE GAS RECIRCULATION IMPROPER DAMPER POSITION									
LOW FLUE GAS OXYGEN									
HIGH STEAM PRESSURE CUTOFF									
HIGH/HIGH STEAM PRESSURE CUTOFF									
Alarm annunciation, safety shutdown and manual reset required for:									
FLAME SIGNAL DETECTED PRIOR TO IGNITION CYCLE									
PRE-IGNITION INTERLOCK OPEN DURING PRE-PURGE									
HIGH FIRE PURGE INTERLOCK FAILS TO CLOSE									
LOW FIRE PURGE INTERLOCK FAILS TO CLOSE									
IGNITER (PILOT) FAILS TO IGNITE									
MAIN BURNER FAILS TO IGNITE									
MALFUNCTION OF FLAME DETECTOR									
MALFUNCTION OF PROGRAMMER									
MALFUNCTION OF FLAME SIGNAL AMPLIFIER									
COMBUSTION AIR PROVING SWITCH ACTUATED PRIOR TO START-UP OF FORCED DRAFT FAN									
LOCK-OUT INTERLOCK OPEN DURING PRE-PURGE									
LOCK-OUT INTERLOCK OPEN DURING IGNITION									
LOCK-OUT INTERLOCK OPEN DURING RUN PERIOD									
INTERLOCK OPEN									
FLAME FAILURE									

2 POINTS LIST FOR BOILER BFT2

NTS