



ETTER Engineering Company, Inc

NFPA 86 2023 Edition - Chapter 7.4 - Safety Report

Report Revision 3.05

Customer:	TEST: A Sample Company	Date:	Nov-01-2024
Location:	Bristol, CT	Phone:	555-555-5555
Contact:	John Smith		
Auditor/s:	Alex Hansen		
Report Number:	98765	Revision:	R0
Equipment Name:	Product Drying Oven		
Model:	PDO #1		
Serial No:	12345-6789		

Audit Results: Failing Items

Burner Gas Train

- Pressure Reducing Regulator: Component not vented. Either vent the Component per requirements or replace with Ventless Component
- Gas Switch: High Pressure: Pressure Switch does not change state when pressure is applied. Replace Switch and/or repair cause of failure

Air Switch: Exhaust

- Air Switch: Exhaust: Pressure Switch does not change state when pressure is applied. Replace Switch and/or repair cause of failure

Documentation Missing or Otherwise Unavailable

- Plumbing Schematics
- Maintenance Procedures
- Documented Purge Calculation



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Audit Details: Component Audit Information

The following items were checked as part of this Combustion Safety Audit. Details for each device may be found below.

Any photos taken can be found in the appendix at the end of the report.

Component: Burner Gas Train

NFPA Compliant: Not Compliant

Isolation Valve	
Manufacturer:	Apollo
Valve Type:	Ball Valve
NFPA Compliant:	Yes

Pressure Reducing Regulator	
Manufacturer:	Maxitrol
Model Number:	210D
Vent Required:	Yes
Vent Compliant:	No
Impulse Line Compliant:	N/A
Setpoint:	16"w.c.
NFPA Compliant:	No
Reason for Non Compliance:	Component not vented. Either vent the Component per requirements or replace with Ventless Component

Gas Switch: Low Pressure	
Manufacturer:	Kromschroder
Model Number:	DG 50T
Vent Required:	No
Verified Accuracy of Setpoint:	Verified Trip Setting
Setpoint:	8"w.c.
Actual Trip Setting:	8"w.c.
NFPA Compliant:	Yes

Safety Shutoff Valve	
Manufacturer:	Siemens
Model Number:	SKP-15
Visual Position Indication:	Compliant
Proof of Closure:	Compliant
SSOV Identifier (Upstream, #1, Main, Etc.):	Upstream
Leakage Measurement:	0 Bubbles
NFPA Compliant:	Yes

Safety Shutoff Valve



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Audit Details: Component Audit Information

Manufacturer:	Siemens
Model Number:	SKP-15
Visual Position Indication:	Compliant
Proof of Closure:	N/A
SSOV Identifier (Upstream, #1, Main, Etc.):	Downstream
Leakage Measurement:	0 Bubbles
NFPA Compliant:	Yes

Gas Switch: High Pressure	
Manufacturer:	Kromschroder
Model Number:	DG 150T
Vent Required:	No
Verified Accuracy of Setpoint:	Verified Trip Setting
Setpoint:	22"w.c.
Actual Trip Setting:	35"w.c.
NFPA Compliant:	No
Reason for Non Compliance:	Pressure Switch does not change state when pressure is applied. Replace Switch and/or repair cause of failure

Isolation Valve	
Manufacturer:	Apollo
Valve Type:	Ball Valve
NFPA Compliant:	Yes

Component: Burner
NFPA Compliant: Compliant

Burner	
Manufacturer:	Honeywell
Model Number:	OP415
Burner Type:	Direct Spark
Capacity:	> 400,000 Btu/hr
NFPA Compliant:	Yes

Component: Air Switch: Combustion
NFPA Compliant: Compliant

Air Switch: Combustion	
Manufacturer:	Kromschroder
Model Number:	DG 50T
Vent Required:	No



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Audit Details: Component Audit Information

Verified Accuracy of Setpoint:	Verified Trip Setting
Setpoint:	4"w.c.
Actual Trip Setting:	4"w.c.
NFPA Compliant:	Yes

Component: Flame Safeguard

NFPA Compliant: Compliant

Flame Safeguard	
Manufacturer:	Honeywell
Model Number:	RM7800
Flame Detection Type:	Flamerod
NFPA Compliant:	Yes

Component: Air Switch: Exhaust

NFPA Compliant: Not Compliant

Air Switch: Exhaust	
Manufacturer:	Antunes
Model Number:	JD-2
Vent Required:	No
Verified Accuracy of Setpoint:	Not Test Ready
NFPA Compliant:	No
Reason for Non Compliance:	Pressure Switch does not change state when pressure is applied. Replace Switch and/or repair cause of failure



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Audit Details: Documentation

The following items are required for NFPA 86 compliance:

Oven Nameplate	Present
Electrical Schematics	Present
Plumbing Schematics	Not Found
Start-Up Procedure	Present
Shut-Down Procedure	Present
Emergency Procedures	Present
Maintenance Procedures	Not Found
Training Procedures	Present
All Procedures Up-To-Date	Yes
All Procedures Accessible	Yes
Documented Purge Calculation	Not Found

Audit Details: Summary Items

The following lines are NFPA requirements, but not specific components.

Pre-Purge Compliance

Purge Airflow:	No
Circulation Airflow:	
Exhaust Airflow:	No
Valve Proof of Closure Interlocks:	Yes
NFPA Compliant:	No
Reason Non-Compliant:	Exhaust air pressure switch has failed and is primary indicator of purge airflow.

Low Fire Start

NFPA Compliant:	N/A
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Purge Time (Verified)	2.5 Minutes
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Should you have any additional questions, comments, or concerns regarding the results of this audit please reach out to us.

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ETTER Engineering

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Appendix: Photos

Note: Any photos below are thumbnails. Left click any photo in a PDF viewer to open the full size photo in a web browser. Links have been provided to view other images in a web browser.

Overall Equipment Photos

[Overall Equipment Photo #1](#)

Burner Gas Train

Pressure Reducing Regulator

[Pressure Reducing Regulator Photo Link](#)

Gas Switch: High Pressure

[Gas Switch: High Pressure Photo Link](#)

Air Switch: Exhaust

Air Switch: Exhaust

[Air Switch: Exhaust Photo Link](#)