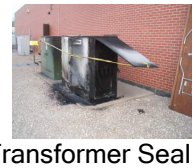
Substation Reliability Experts, Inc.
Licensed provider of FortiFire® technology

Fortifire®

Enclosed find a library of our tools and learn how we can customize for you!


Cable Penetration Seal


Auxiliary Transformer Seal (damaged)


Auxiliary Transformer Seal


Transformer Cable Drop Penetration Seal


Cable Joint Wrap


Cable Wrap Protection


Cable Tray Penetration


Control Cable Protection (canopy)


Hatch Cover Protection


Customized Indoor Fire Structure Protection - Egress


Customized Indoor Fire Structure Protection


Cable Trough Sealing


Weather & Fire Seals


Flexible Boot Penetration Seals


Silicone Elastomer Seals

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A Note from Our Team to Yours

Substation Reliability Experts, Inc. (SRE) has teamed up with Luse Thermal Technologies, LLC to bring you Fortifre® customizable fire and oil protection. Installations of our designs do not require outage scheduling or opening of electrical cabinets enabling us to provide swift solutions.

We are two dedicated companies devoted to superior service to meet your needs. Thank you for the opportunity to see what we can do for you!

Warmest Regards,
The Substation Reliability Experts, Inc. Team (SRE)

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Fortifire®
Table of Contents & Preview

Tab 1: FortiFire® Quote Check-List:
- A preview of our site visit check-list to assist our team with customizing your FortiFire® Systems.

Tab 2: Penetration Seals:

A. Cable Penetration Seals:
- Cable penetration seals are used to prevent smoke/fire/gas from moving to adjacent rooms while maintaining the fire rating of the floors.

B. Transformer Cable Drop Penetration Seals:
- Environmental and fire event protection is provided in two facets: *First*, the installed design prevents leaking oil, water, animals, etc. from using the openings to access the building's cable space. *Secondly*, penetration activates itself in a fire event to swell and lock the opening protecting against the flow of fire and hot oils from traversing to the building's cable space.

C. Auxiliary Transformer Seals:
- Design is used when oil filled equipment is within 10 feet of the building. Seals prevent the fire event from entering the cable space through the exterior wall openings.

D. Cable Tray Penetrations Seals:
- As cable trays run throughout the plant, seals provide a barrier between rooms protecting equipment from smoke and fire.

Tab 3: Wraps:

A. Cable Joint Protection:
- Most fires begin at the cable joint. Wraps shield the adjacent cables and equipment from the fire source.

B. Cable Wrap Protection:
- Wraps protect cables from nearby fire. Especially useful for cables adjacent to cable joints.

C. Control Cable Protection (Canopy):
- Flexible fabric cradles the cable tray and protects from burning cables below.

Table of Contents & Preview (continued)

Tab 4: Structural Protection:

A. Hatch Cover Protection:
- The radiant heat shield provides a thermal barrier preventing instantaneous combustion on the cold side of a fire. In addition it also protects the room and equipment.

B. Customized Indoor Fire Structure Protection:
- Structural Steel Fireproofing eliminates adhesion problems common to spray applied fireproofing. Easily installed for retrofit applications.
- 2-hour fire rated walls may be customized around existing construction providing a safe exit path for personnel.

Tab 5: Additional Seal Options:

A. Weather & Fire Seals:
- Weatherproof seals covering fire rated sealants are installed in the floor preventing water, smoke, etc. from moving to other areas. Also provide excellent UV protection.

B. Flexible Boot Penetration Seals:
- Seals allow for highly dynamic pipe movement under considerable pressure.

C. Silicone Elastomer Seals:
- Seals allow for a three hour fire rating and provides considerable pressure resistance.

D. Cable Trough Sealing:
- Sealing prevents the flow of oil, water, etc. into other equipment areas.

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Tab 1

FortiFire® Quote Check-List

A preview of our site visit check-list to assist our team with customizing your FortiFire® Systems.

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Plant Information

Plant Name: _____ Unit #: _____

Location (ie: control room): _____

Address: _____ City: _____ State: _____ Zip: _____

Contact Name: _____ Phone Number: _____ Ext. _____

Alternate Contact: _____ Phone Number: _____ Ext. _____

Sketch Received: □ Yes □ No
*The sketch would be a preliminary drawing specifying doorways, control cabinet locations, etc. We would use these drawings to label each penetration, cable wrap, etc. location(s) to easily organize information pertaining to each point of work. *The labels will be called Location ID's.*

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Penetration Seals:

Location ID: _____
Cable Penetrations Seals:
Old Seals Needed to be Removed: _____
Round Seal: ☐ Rectangular Seal: ☐ Blank Seal: ☐
Opening Length: _____ Diameter: _____
Opening Width: _____
Penetration/Wall Depth Measurement (i.e. how much space are we packing?):
_____
Current # Cables through opening: _____
Substrate: Attachment Point Material: (i.e. concrete, etc.): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Location ID: _____
Transformer Cable Drop Penetration Seals:
Number of Cables: _____
Cable is coming out of: _____
Cable is going through: _____
Penetration Depth Measurement (i.e. how much space are we packing?)
Spec calls for 7": _____
Substrate: Attachment Point Material: (i.e. concrete, etc.): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Penetration Seals (continued):


Location ID: _____
Auxiliary Transformer Seals:
Number of Cables/Holes: _____
Cable is coming out of: _____
Cable is going through: _____
Substrate: Attachment Point Material: (i.e. concrete, etc.): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Location ID: _____
Cable Tray Penetration Seals:
Cable Tray Length: _____
Cable Tray Width : _____
Hole to fill measurement: _____
Cable is going through: _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

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Wraps:

Location ID: _____
Cable Joint Protection:
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Location ID: _____
Cable Wraps:
# of cables surrounding the spliced cables: _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Wraps (continued):

Location ID: _____
Control Cable Protection (canopy):
Length: _____
Width: _____
Distance from cables below: _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Structural Protection:

Location ID: _____
Hatch Cover Protection:
(Attachment point is always metal)
Hatch Door Length: _____
Hatch Door Width: _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

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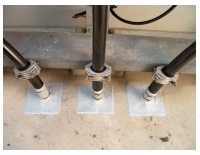
Structural Protection (continued):



Location ID: _____
Customized Indoor Fire Structure Protection:
Wall Width: _____
Wall Height: _____
Equipment/Materials on Side 1 of wall: _____
Equipment/Materials on Side 2 of wall: _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Additional Seal Options:



Location ID: _____
Weather & Fire Seals:
Width: _____
Length: _____
Attachment Point Material: (i.e. concrete, etc.): _____
Protecting from (oil, water, fire, etc.): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

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Additional Seal Options (continued):

Location ID: _____
Flexible Boot Penetration Seals:
Width: _____
Length: _____
Attachment Point Material: (i.e. concrete, etc.): _____
Protecting from (oil, water, fire, etc.): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Location ID: _____
Silicone Elastomer Seals:
Penetration Width: _____
Penetration Length: _____
Attachment Point Material: (i.e. concrete, etc.): _____
Protecting from (oil, water, fire, etc.): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

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Additional Seal Options (continued):

Location ID: _____

Cable Trough Sealing:
Cable Trough Width: _____
Cable Trough Length: _____
Cable Trough Location (inside/outside): _____
Access (easy to difficult)
1 2 3 4 5 6 7 8 9 10
Fall Protection Required? ☐ Yes ☐ No
Unit Energized: ☐ Yes ☐ No
FR's Required: ☐ Yes ☐ No
Notes:

Tab 2

Penetration Seals:

Descriptions of our penetration seal line. Each component will be customized to your needs. The possibilities are endless!

E. Cable Penetration Seals:
- Cable penetration seals are used to prevent smoke/fire/gas from moving to adjacent rooms while maintaining the fire rating of the floors.

F. Transformer Cable Drop Penetration Seals:
- Environmental and fire event protection is provided in two facets: *First*, the installed design prevents leaking oil, water, animals, etc. from using the openings to access the building's cable space. *Secondly*, penetration activates itself in a fire event to swell and lock the opening protecting against the flow of fire and hot oils from traversing to the building's cable space.

G. Auxiliary Transformer Seals:
- Design is used when oil filled equipment is within 10 feet of the building. Seals prevent the fire event from entering the cable space through the exterior wall openings.

H. Cable Tray Penetration Seals:
- As cable trays run throughout the plant, seals provide a barrier between rooms protecting equipment from smoke and fire.

MSDS Information
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Cable Penetration Seal

Problem:
Cables located in the plant present a risk for room to room fire, smoke, and gas transfer.

SRE Solution:
Penetration seals segment rooms preventing fire chain reaction.

SRE Advantages:

- Ability to pull new or remove old cables and easily reinstall the designed fire protection system.
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Ability to accommodate openings up to 6'' in diameter.
- Three hour fire rating

Material(s) Description:
FS-One Firestop Caulk
FS-657 Fire Block
CP643N Firestop Collar
*one or more depending on design

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Cable Penetration Seals (continued)

Before and After Photos:





Tab 3

Fire Protecting Wraps:

Descriptions of our fire protective wraps used to contain fires and protect surrounding equipment.

D. Cable Joint Protection:
- Most fires begin at the cable joint. Wraps shield the adjacent cables and equipment from the fire source.

E. Cable Wrap Protection:
- Wraps shield the fire preventing further fire damage.

F. Control Cable Protection (Canopy):
- Flexible fabric cradles the cable tray and protects from burning cables and equipment below.

MSDS Information
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Transformer Cable Drop Penetration Seal

Problem:
Oil filled equipment has potential to leak putting nearby equipment at risk.

SRE Solution:
Seal prevents oil from entering the conduit and damaging adjacent equipment. The conduit firestop also provides a seal against damaging contaminates such as dirt, yard stone, and water. Seals also provide UV protection.

SRE Advantages:
- Ability to adjust cables and easily reinstall the designed fire protection system
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Materials can withstand UV light.
- Protects against oil leakage, water, animals, etc. from using the openings to access the building's cable space

Material(s) Description:
CP620 Fire Foam
RTV Silicone

Photos:



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Auxiliary Transformer Seal

Problem:

Auxiliary transformers contain oil. During an abnormal event, oil can flow down conduits and enter the substation basement.

SRE Solution:

Seals are installed with a patented process using foam and caulk materials preventing oil leakage into cable space and by nearby equipment. The conduit firestop also provides a seal against damaging contaminates such as dirt, yard stone, and water. If oil filled equipment is within 10 feet of a building, be safe and prevent leakage!

SRE Advantages:

- Ability to adjust cables and easily reinstall the designed fire protection system
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Materials can withstand UV light.

Material(s) Description:

CP620 Fire Foam
CP601S Silicone Caulk

Before and After Photos:

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Cable Tray Penetration

Problem:
In the event of a fire, a cable tray serves as a path for the fire to move to other areas of the plant.

SRE Solution:
Sealing wall openings where cable trays travel prevent fire and smoke from moving to other rooms' further spreading damage.

SRE Advantages:

- Ability to remove penetration seals for cable additions and updates.
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Ability to accommodate openings up to 6'' in diameter.
- Three hour fire rating

Material(s) Description:
FS657 Fire Block
FS1 Caulk

Photos:

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Tab 3

Fire Protecting Wraps:

Descriptions of our fire protective wraps used to contain fires and protect surrounding equipment.

G. Cable Joint Protection:
- Most fires begin at the cable joint. Wraps shield the adjacent cables and equipment from the fire source.

H. Cable Wrap Protection:
- Wraps shield the fire preventing further fire damage.

I. Control Cable Protection (Canopy):
- Flexible fabric cradles the cable tray and protects from burning cables and equipment below.

MSDS Information
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Cable Joint Protection

Problem:
Cable joints and splicing are a prime location for fires to begin.

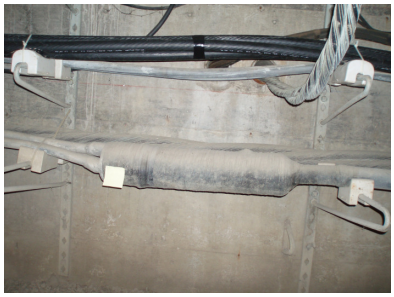
SRE Solution:
This standard is used to apply a protective wrap to power cable joints and power cables in the vicinity of joints. The intent of this procedure is to reduce the effects of a joint or splice failure upon power distribution cables and to reduce the spread of fire after a "flash" event. The EP3990 wrap material is not designed to contain a joint failure. The intent of the wrap is to mitigate the impact of flame, hot gasses and molten materials upon surrounding power cables.

SRE Advantages:

- Ability to remove fire wraps to update joints and re-route cables.
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Emit extremely low levels of smoke/toxic gas when subjected to fire
- Flexible yet durable material
- Joints closely located to each other may be wrapped as a group, or individually wrapped.

Material(s) Description:
EP-3990 Wrap

Before and After Photos:

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Cable Wrap Protection

Problem:
Cables located in the vicinity of cable joints are at an increased risk of catching fire. Cables running throughout the plant serve as a pathway for fire spread.

SRE Solution:
This standard is used to apply a protective wrap to power cable joints and power cables in the vicinity of joints. The intent of this procedure is to reduce the effects of an arc blast upon power distribution cables and to reduce the spread of fire after a "flash" event. The EP3990 wrap material is not designed to contain an arc blast. The intent of the wrap is to mitigate the impact of flame, hot gasses and molten materials upon surrounding power cables.

SRE Advantages:

- Ability to remove fire wraps to update joints and re-route cables.
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Resists flames up to 1900ºF
- Emit extremely low levels of smoke/toxic gas when subjected to fire
- Flexible yet durable material
- Joints closely located to each other may be wrapped as a group, or individually wrapped.

Material(s) Description:
EP-3990 Wrap

Before and After Photos:



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Control Cable Protection (Canopy)

Problem:
Fire spread below introduces the possibility of overhead cables catching fire.

SRE Solution:
Fire barrier cloth can be fabricated to fit inside the cable trays. It protects control cables from burning power cables, allowing time for the continued switching of circuits in the station. In the event of burning cables, hot gasses will arise and be deflected by the Ami-Sil® FB3600-UT.

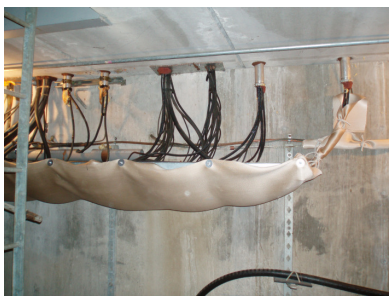
SRE Advantages:

- Ability to remove fire wraps to update joints and re-route cables.
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Resists flames up to 1800ºF
- Emit extremely low levels of smoke/toxic gas when subjected to fire
- Flexible yet durable material
- minimum 96% pure amorphous silica cloth designed for extreme temperature protection.
- Will not ignite or burn
- Will not melt , drip or emit toxic smoke

Material(s) Description:
Ami-Sil® FB3600-UT

Before and After Photos:





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Tab 4

Structural Protection:

Descriptions of unique options to safely secure structures throughout the plant.

A. Hatch Cover Protection:
- Lightweight material provides a thermal barrier preventing instantaneous combustion on the cold side of a fire. In addition it also protects the room and equipment.

B. Customized Indoor Fire Structure Protection:
- Structural Steel Fireproofing eliminates adhesion problems common to spray applied fireproofing. Easily installed for retrofit applications.
- 2-hour fire rated walls may be customized around existing construction proving a safe exit path for personnel.

MSDS Information
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Hatch Cover Protection

Problem:
During a basement fire, heat radiating through an unprotected steal hatch cover may melt the battery array. The result typically leads to loss of control by the remote load dispatch team. The damage to the building and surrounding equipment is far greater when control is lost.

SRE Solution:
Hatch door seal creates a thermal transfer barrier thus preventing instantaneous combustion which can damage adjacent equipment.

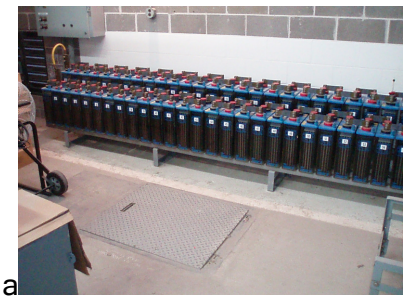
SRE Advantages:

- Ability to remove boards subjected to fire event and easily reinstall the designed fire protection system
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Ability to customize according to your existing hatch door.

Material(s) Description:
CP675T Board
CP648E Wrap Strip
FS-One Firestop Caulk

Before and After Photos:



a 

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Customized Indoor Fire Structure Protection

Problem:
Many older structures do not allow for individuals to safely exit a building on fire.

SRE Solution:
We have a variety of resources allowing us to customize to your specific and unique needs. These include indoor fire walls, structural support fire proofing, and more.

SRE Advantages:

- Ability to customize even to the most unusual existing
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.

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Customized Indoor Fire Structure Protection - (continued)

Photos:

Structural Steel Fire Proofing:


2-Hour Fire Rated Indoor Walls: - Egress

Fire Proofing Staircase and Walls:


Cable Seal through Functioning Door:


Tab 5

Additional Seal Options:

Description of our variety of fire seal protection for both indoor and outdoor applications.

A. Weather & Fire Seals:
- Weatherproof seals covering fire rated sealants are installed in the floor preventing water, smoke, etc. from moving to other areas. Also provide excellent UV protection.

D. Flexible Boot Penetration Seals:
- Seals allow for pipe movement under considerable pressure.

E. Silicone Elastomer Seals:
- Seals allow for three hour fire rating and provide considerable pressure resistance.

D. Cable Trough Sealing:
- Sealing prevents the flow of oil, water, etc. into other equipment areas.

MSDS Information
Please contact us to receive information.

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Substation Reliability Experts, Inc.
Licensed provider of FortiFire® technology

Weather & Fire Seals

Problem:
Water, dirt, smoke, and oil have the potential to seep through cable openings causing damage to control areas.

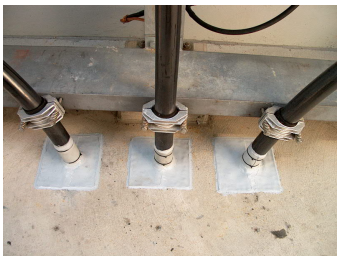
SRE Solution:
Silicone sheeting and caulk provide leakage protection in concrete roofs, protect fire rated sealants installed in floors, and encapsulate power cables as they penetrate concrete decks.

SRE Advantages:

- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Provides UV protection

Material(s) Description:
Silicone Sheet
Dow Sylguard

Photos:



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Flexible Boot Penetration Seal

Problem:
In the event of a fire cables undergo great amounts of heat and pressure threatening the possibility of further fire damage through wall penetrations.

SRE Solution:
These seals allow for dynamic pipe movement under considerable pressure. Penetration seals have a 3-hour fire rating.

SRE Advantages:

- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now.
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.
- Allow flexible movement under extreme pressure.

Material(s) Description:
This is a nuclear application adapted to T&D. Materials upon request.

Photos:



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Silicone Elastomer Seal

Problem:
In the event of a fire cables traveling through walls provide a fire destruction path.

SRE Solution:
These seals protect cables from adjacent fires. Penetration seals have a 3-hour fire rating allowing ample time to re-direct power.

SRE Advantages:

- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now.
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.

Material(s) Description:
Silicone Elastomer Seals

Photos:


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Cable Trough Sealing

Problem:
In the event of a fire, oil and water may flow through the trough to other equipment causing additional damage.

SRE Solution:
Cable trough sealing prevents burning oil and water from flowing from transformer to transformer and to other equipment areas.

SRE Advantages:

- Materials used allow for future cable pulling and updates without dam grout damage.
- Before and after matrix aid in proper system selection. Also provides visual to compare completed work insuring correct installation.
- Design drawings are assembled allowing each step of the process is able to be understood by a novice installer. Following each step in sequence insures a fire protection installation that will function in a fire/smoke event.
- Ability for corrective maintenance to be performed 10, 20, even 30 years from now.
- System designs are installed by SRE's trained and certified installers.
- Ability to install while the unit is live.

Material(s) Description:
5 Star Grout
Urethane Foam

Before and After Photos:



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