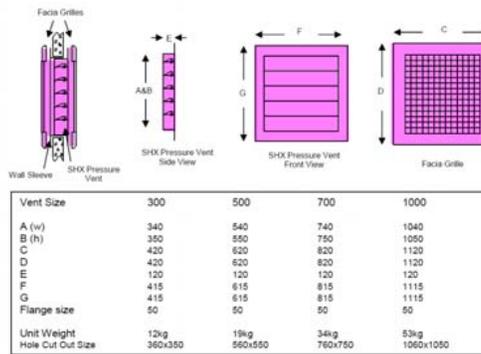
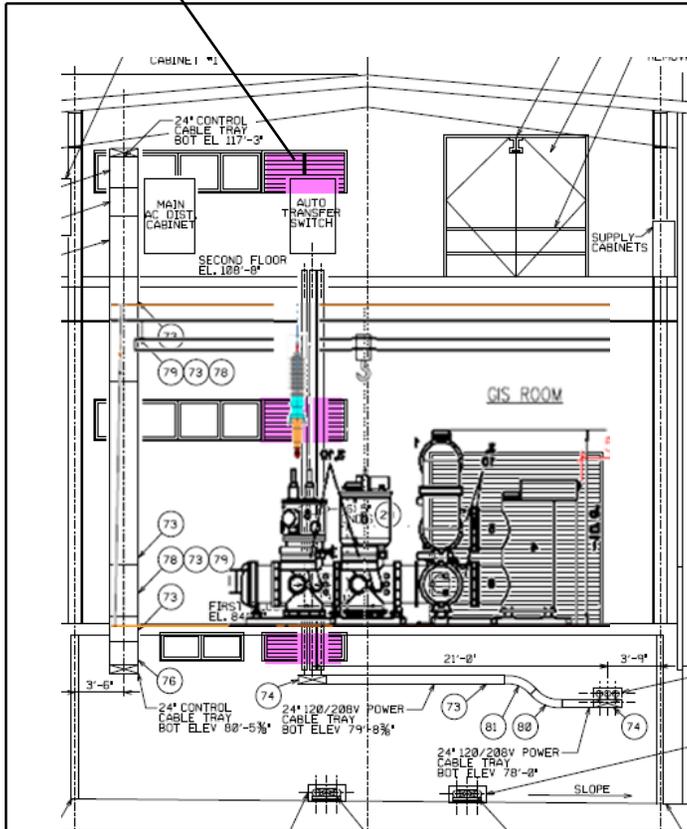
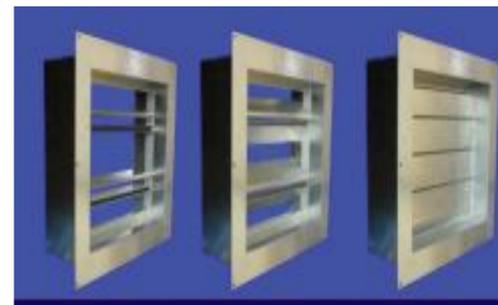
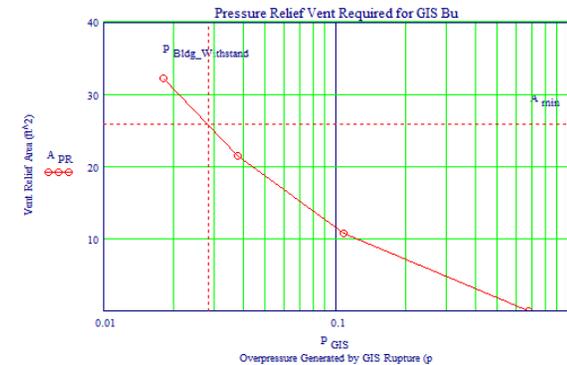


# Pressure Relief Louver for GIS



Estimated Min Pressure Area:  $A_{min} = 26 \text{ ft}^2$

Recommended Min:  $A=3\text{ft}\times 3\text{ft}$  Net full open TBD with vent relief manufacturer.



## REFERENCES

**NFPA** **IS Building to comply with NFPA 68:**  
Standard on Explosion Protection by Deflagration Venting

**IEEE**  
Influence of buffer volumes on pressure rise in switchgear installations due to internal arcing

## BACKGROUND

High voltage electrical equipment has the potential to cause overpressures under failure conditions. Where this occurs indoors there is a risk of damaging the building.

Generally, arc fault overpressures are dependent on room volume, fault level, time of the electrical fault and type of equipment. The effect of arc fault overpressures reduce as the room volume increases as the energy released is more uniform and not subject to as many variables.

Peak pressures are much greater for any given volume and occur over a shorter duration, but are subject to many variables. Because the most likely peak pressure in a deflagration is much greater than the peak pressure of an arc fault and occurs over a shorter duration, vents must be larger and operate more rapidly.

Venting for both arc fault induced overpressures and deflagrations may reduce the risk of damage to buildings and persons in the vicinity.

Relief Vent Sample by PSE&G  
Hinchman Ave Sub 230kV GIS BLDG



REVISION APPROVAL RECORD						REV	DATE	REVISIONS	BY	CHKR	DRAWING STATUS					PROJECT NO. : 30884			
DISCIPLINE	BY	DATE	DISCIPLINE	BY	DATE						ISSUED	REV	DATE	SDE	PEM	DRN:	DATE: 07-18-14		
ARCH.			MECHANICAL								DRAFT	A	07-18-14		AP	CHKD:	DATE: 07-18-14		
CIVIL			NUCLEAR																
ELECTRICAL			PIPING																
ENVIRON.			PROCESS																
GEN. ARRANG.			QA / QC																
HVAC			STRUCTURAL																
I & C																			
											APPROVED FOR CONSTRUCTION					SCALE: NTS	SKT No 3 of 5	07-18-18	REV. A
											NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED & DATED. DESTROY ALL PRINTS BEARING EARLIER DATE &/OR REV.NO.								