

C57.19.100 Bushing Application Guide Meeting Minutes

Nov 15,2021 Virtual Meeting

Tommy Spitzer – Chair

The meeting was called to order at 2:20 with 43 people present but we did not achieve a quorum. I announced that our Secretary Jeff Benach has changed jobs and his new employer is not involved with bushings and wants him attending meetings that are applicable to his new responsibilities so his is forced to resign due to a conflicting meeting. I asked for new volunteers and have a favorable response that has to clear it with his employer.

We performed a second poll but again did not achieve quorum so no business could be conducted, but we did have some open discussions. Durand Stacy pointed out an error in the Spring Meeting Minutes which will be corrected.

The Bushing Committee has determined that this guide is the best place to address bushing loading and Tom Hartman said he is not a member but as a user this issue is important to him and his company if they cannot overload bushings. Steve Brzoznowski also had concerns about how this should be addressed. David Geibel pointed out that overloading is not prohibited but if overloaded there is loss of life, and it will be incumbent on each user to determine their level of acceptance.

There are formulas to determine this loss of life in the current guide. These formulas require the use of a thermal constant that can be obtained from the manufacturer. These formulas were developed for OIP bushings and as such the loss of life is attributed to aging of the paper. Newer solid type bushing will have different reactions to overloading. These also have a thermal constant which can be supplied, and MAY have similar loss of life. They will also have a maximum temperature at which point the material will melt resulting in failure. This issue to be fully addressed would require a change in our PAR scope. Since we are almost ready to ballot this revision it was felt that this should be address in the next revision which should be started soon and not wait for the 10 year life cycle.

It was also pointed out that since bushings are based in steps of current their current rating will be above the maximum current of the transformer so the overload of the transformer and the bushing will not be identical.

I will use this discussion to make a third draft and send out for comments. Due to the upcoming end of the year and holidays I will ask that these comments be back by mid-January and try to get the document in the voting process as soon as possible. I will also be reviewing our member list to remove non-participating members.

We adjourned at 3:05

Reported by: Tommy Spitzer

Fall 2021 Attendance – Virtual Meeting 11-15-21

First Name	Last Name	Company
Kayland	Adams	SPX Transformer Solutions, Inc.
Barry	Beaster	H-J Family of Companies
Thomas	Blackburn	Gene Blackburn Engineering
William	Boettger	Boettger Transformer Consulting LLC
Steven	Brzoznowski	Bonneville Power Administration
Juan Carlos	Cruz Valdes	Prolec GE
Sami	Debass	Electric Power Research Institute (EPRI)
J. Arturo	Del Rio	Siemens Energy
Scott	Digby	Duke Energy
Huan	Dinh	Hitachi Energy
Jeffrey	Door	H-J Family of Companies
Hugo	Flores	Hitachi Energy
Raymond	Frazier	Ameren
Eduardo	Garcia Wild	Siemens Energy
David	Geibel	--
Thomas	Hartmann	Pepco Holdings Inc.
Daniel	Huenger	PCORE Electric
Kurt	Kaineder	Siemens Energy
Gael	Kennedy	GR Kennedy & Associates LLC
Marek	Kornowski	Polycast International
Mario	Locarno	Doble Engineering Co.
Bruno	Mansuy	Trench France SAS
Susan	McNelly	Xcel Energy
Robert	Middleton	RHM International
Zachary	Millard	Great River Energy
Rajkumar	Padmawar	ASAsoft (Canada) Inc
Dipakkumar	Patel	Instrument Transformer Equip Corp
Afshin	Rezaei-Zare	York University
Eric	Schleismann	Southern Company Services
Dan	Schwartz	Quality Switch, Inc.
Devki	Sharma	Entergy
William	Solano	Instrument Transformer Equip Corp
Thomas	Spitzer	City Transformer Service Co.
Fabian	Stacy	Hitachi Energy
Troy	Tanaka	Burns & McDonnell
Dervis	Tekin	Meramec Instrument Transformer Co.
Jacques	Vanier	Electro Composites (2008) ULC
Yves	Vermette	Electro Composites ULC
Loren	Wagenaar	WagenTrans Consulting
Eric	Weatherbee	PCORE Electric
Christopher	Whitten	Hitachi Energy
Shibao	Zhang	PCORE Electric
Peter	Zhao	Hydro One