

Technical Bulletin

TB 0374 Terminating Hitachi Energy screened straight connector

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Content Owner: Steven Paton – Asset Engineering Manager

Approved By: Edmund Li – Head of Asset Management & Digital

Purpose

This TB is a reminder to adhere to installation instructions provided by Hitachi Energy for the screened straight connectors in ABB Safelinks.

Background

Recently there was a failure of a screened termination of a Safelink CFCC in a padmount substation in Cranebrook. This is the first screened termination failure since its introduction into EEs Distribution network in 2020.

The failure created a burnt hole in the termination and a hole through the cable chamber partition panel. The failure occurred 2.5 years after commissioning this switchgear.

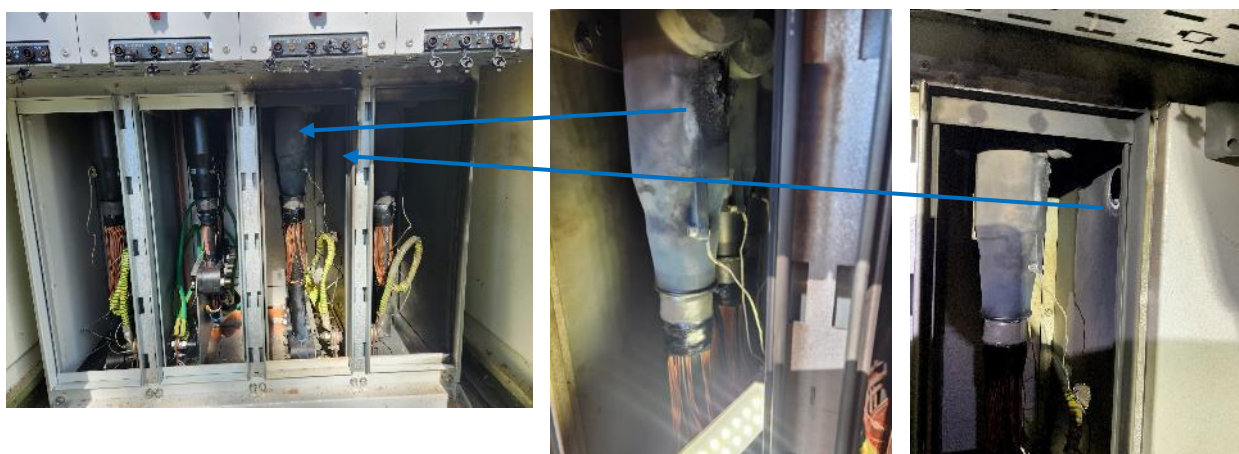


Fig. 1 Screened Termination failure

Actions

A post-mortem was conducted at the Technical Training Centre and the findings are as below:

- The cable lug bolt head and washers of the C phase termination had melted and only the thread and spring washer were remaining.
- The end of the bolt had been cross threaded.
- The cable lug was off from the bushing stem.
- The cable lug connections on the other 2 phases were in good condition.



Fig. 2 Cable lug off



Fig. 3 Melted bolt



Fig. 4 Good connection of B & A phase

Based on the above findings, it can be concluded that the bolt was probably not tightened to the recommended torque. Over time and possibly due to the passage of previous fault currents the bolt became loose. This eventually led to the described failure.

Recommendation

All jointers are reminded to adhere to the installation instruction that is supplied together in the termination kit box.

6. Bolt the cable lug to the bushing stem (with the nut above the lug barrel). Tighten min. 45 Nm to max. 72Nm.



Fig. 5 Tightening cable lug with a torque wrench

Please view the installation video in the following QuickBytes YouTube link:

[\(613\) ABB CSE N630 Connector - YouTube](#)

Implementation

The contents of this Technical Bulletin shall be implemented immediately.

Impacted Standards

- SDI 211 – ABB SafeLink 12kV switchgear
- MCI 0006 – Underground construction manual

Contacts

For further information contact:

Raymond Danam, Engineer – Mains Standards

Brett Grenfell, Engineer – Mains Standards

Brent Alvis, Senior Assessor Trainer

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Content owner: Steven Paton, Asset Engineering Manager

Approver by: Edmund Li, Head of Asset Management & Digital