SEISMIC RESILIENCE CERTIFICATION

Seismic resilience is the ability for a building and its components to withstand the effects of an earthquake and continue to be functional. The levels of earthquake protection are defined by the IL(Importance Level) that the building is designed to.

The Building Code defines the significance of a building by its importance level (IL), which is related to the consequences of failure. There are five levels of importance, considered by the importance of the building to society:

- **Level 1:** Structures presenting a low degree of hazard to life or property, such as walkways, outbuildings, fences and walls.
- **Level 2:** Normal structures and structures not covered by other categories, such as timber-framed houses, car parking buildings or office buildings.
- **Level 3:** Structures that may contain crowds, have contents of high value to the community or pose a risk to large numbers of people in proximity, such as conference centres, stadiums and airport terminals.
- **Level 4:** Buildings that must be operational immediately after an earthquake or other disastrous event, such as emergency shelters and hospital operating theatres, triage centres and other critical post-disaster infrastructure.
- **Level 5:** Structures whose failure poses a catastrophic risk to a large area or a large number of people, such as dams, nuclear facilities or biological containment centres.

In Australia we are seeing an increasing number of building specifications designed to IL4. IL4 is used mainly in Hospitals, Emergency shelters and post disaster structures that need to remain operational immediately after an earthquake. IL4 references structural and non-structural elements of a building and different testing is required for each.

Electrical Switchboards fall in the non-structural plant and equipment and need to undergo Sweep Vibration Testing to demonstrate the endurance of the devices under seismic conditions.

Based on above requirements, B.E. Switchcraft embarked on a Seismic restraint testing for Non-Structural components according to AS 1170.4-2007 SECTION 8 DESIGN OF PARTS AND COMPONENTS 8.1.4 Part (b) mechanical and Electrical components, (xv) Electrical panel board. Testing was completed by Austest following IEC60068 - international standard for Environmental testing of electrotechnical products.

This successful testing was undertaken at Austest located at 2 Brex Ct, Reservoir VIC 3073 and was completed using the general method of the sinusoidal vibration with resonance on an electrodynamic shake table.

Test Report No.
0929BES20068

Sinusoidal Vibration with Resonance Test
IEC 60068-2-6:2007; AS1170.4-2007

Test Item: **Complete Assembly**
Test laboratory: Austest Laboratories, 2 Brex Court, Reservoir VIC 3073

BE Switchcraft switchboards can be found throughout Australia, from Parliament House in Canberra through to major hospitals, commercial buildings and sporting stadiums across the country. For over 5 decades we have built a reputation on trust, integrity, innovation and delivering on our commitments. Leading electrical contractors and engineers choose BE Switchcraft because of our ability to deliver a wide range of products and services that are renowned for their design, build quality and outstanding long-term support.

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