Fact Sheet – Compliance with International Building Codes

OVERVIEW:

Johnson Controls has a long history of leadership in the seismic engineering field. We have been offering certificates of compliance in accordance with the International Building Code (IBC) since 2004. We have maintained an active presence in this arena and as compliance requirements increase from the Office of Statewide Health Planning and Development (OSHPD), we will aggressively manage meeting or exceeding those requirements. OSHPD is regulating agency for the installation of HVAC and Fire Life Safety systems and non-structural equipment in California health care facilities.

DESCRIPTION:

Driven by market forces, the emergence of IBC Seismic Codes and the adoption of IBC by all states, Johnson Controls elected to accept a leadership position in the area of seismic certification to sustain our competitive advantage in the marketplace as follows:

HISTORY:

- Johnson Controls has regularly interacted with OSHPD since 2003 on complex support issues for seismic certification on health care facilities in California.
- In 2004 a cross-functional team was formed to elevate and address safety and ensure seismic compliance.
- We have supported ASHRAE research at the Multi-Disciplinary Center for Earthquake Engineering Research (MCEER) to quantify the amplification effects of spring isolated HVAC equipment.
- We pioneered shake-table testing and analysis of a complete commercial chiller that was charged, filled with water and subsequently operated; both rigid and spring isolated.
- We have performed analytical dynamic response comparisons for our flagship large tonnage centrifugal chiller line.
- In March 2005, we achieved IBC seismic certification for our flagship large tonnage centrifugal chiller line by shake table testing and analysis per American Society of Civil Engineers 7.
- In June 2009, we received 3rd party IBC seismic certification for many sizes of indoor and outdoor air handler unit fans by shake table testing and analysis per ASCE 7.
- In November 2009, we received OSHPD Special Seismic Certification for our flagship large tonnage chiller.

INVOLVEMENT:

- We were instrumental in the creation of the AHRI seismic subcommittee, which is drafting the first seismic analysis standard that will address HVAC equipment.
- We maintain an active presence on the following committees that are helping to develop the next generation of seismic regulations: Building Seismic Safety Council (BSSC), ASHRAE TC 2.7 (Seismic Resistant Design), and the ASCE (Section TC-8 on non-structural component seismic response) and the Boiler and Pressure Vessel Code Committees of the American Society of Mechanical Engineers (SG Heat Transfer Equipment - SC VIII).
- Johnson Controls currently works with the OSHPD leadership team on many of the above committees and have provided input to their process for certifying non-structural components.
- In alignment with our commitment to serving the needs of our California health care facility equipment customers, Johnson Controls is currently engaged with California structural engineers to obtain the necessary pre-approvals from OSHPD for several key HVAC equipment families. Johnson Controls is continuing its efforts to have our full complement of HVAC and Fire Life Safety systems and non-structural equipment available with OSHPD approval. For specific applications of seismic rated products, please contact the applications support team for each product.

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CREDIBILITY:

Wherever the requirements of the IBC have been enforced, Johnson Controls has provided seismic certificates of compliance for HVAC products including: Large Tonnage Chillers, Air Handling Units, Small Tonnage Chillers and Commercial Systems. These certificates are based upon a combination of analysis and shake table testing and have been submitted to authorities having jurisdiction in both the domestic and international markets.

OSHPD's history of seismic regulations coupled with the higher risk of earthquake occurrence in California, led to the formulation of a Code Application Notice (CAN) 2-1708A.5. This document establishes the additional special inspections and qualifications that are needed for non-structural components to be installed in California health care facilities. The document requires pre-approval of a product or submission of approval on a job-by-job basis.

Johnson Controls is dedicated to serving the equipment certification needs of our California health care facility customers. The cross-functional seismic team we established in 2004 proactively works to maintain a deep understanding of the special requirements facing these customers.

Our commitment includes hosting an internal workshop focused on the impact of seismic certification and OSHPD approval of HVAC equipment for health care facilities. The workshop featured a respected California structural engineering firm that specializes in the field of seismic certification of non-structural equipment for California health care facilities specific to the OSHPD Code Application Notice (CAN) 2-1708A.5. The California structural engineering firm advised the Johnson Controls product engineering team on testing protocol, process and compliance issues inherent in seismic certification of non-structural product for health care facilities.

Our leadership in the seismic arena is part of our continuing commitment to deliver a more comfortable, safe and sustainable world to our customers.

CONTACTS:

For more information visit www.johnsoncontrols.com or contact your local branch office.