Subject: Periodic Inspection for Single-pass fillet welds not exceeding 5/16 inch in size

Reference: 2013 CBC 1705.2; Reference Standard AWS D1.1

Purpose:
Periodic inspection by a special inspector is permitted for single-pass welds not exceeding 5/16 inch in size, provided the materials, welding procedures, and qualifications of welders are verified prior to the start of the work. The periodic inspections are made of the work in progress, and a visual inspection of all welds is made prior to completion or prior to shipment of shop welding.

General exceptions per 1704.2 stipulates that special inspections are not required for the following: 1) for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official, 2) occupancies in Group U that are accessory to a residential occupancy unless otherwise required by the building official, and 3) structures designed and constructed in accordance with the cold-formed steel light-frame construction provisions of Section 2211.7 or the conventional light-frame construction provisions of Section 2308.

Findings:

1. Periodic inspection is required for all single-pass fillet welds not exceeding 5/16 inch in size that are associated with the members of the structural frame and secondary members as defined in the current code resisting dead load, live load, and earthquake load/wind.

2. Periodic inspection is required for all single-pass fillet welds not exceeding 5/16 inch in size for non-building structure as defined in the current code except as noted below.
   a) Detailing requirements not require per current code such as signs, billboards, etc.
   b) Storage racks less than 8 feet in height.
   c) Cold-formed steel framing shall comply with inspection requirements per Section 1705.11.3.
3. Periodic inspection is required for the storage racks 8 feet or greater in height for fillet welds exceeding 1/8 inch.

4. Periodic inspection is NOT required for miscellaneous welds such as handrails, guardrails, etc. not exceeding 1/8 inch fillet weld.

5. Periodic inspection is NOT required for welding associated with equipment (not in H occupancy) not exceeding 1000# and less than 6 feet in height and located at the slab/pad on grade.

6. Architectural, mechanical and electrical components shall comply with inspection requirements per Sec 1705.11.5 and 1705.11.6, respectively.