TECHNICAL BULLETIN

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STANDING SEAM METAL ROOF WARRANTIES

The Conklin Company Building Products Division currently includes Standing Seam Metal Roofs (SSR) for 1-10 year Manufacturers Materials MR warranty program. Total Manufacturer's Warranties are now available on a case by case basis for standing seam metal roofs. ***All Joint warranty proposals must be submitted for internal review for possible acceptance.***

Though promoted as the first singly-ply roof in the roofing industry SSR's have problems. Performance deficiencies in design, strength and contraction ultimately result in problems with water-tightness at critical areas. The areas most affected are panel end laps, eaves, and perimeter flashings and at the concealed clip locations where melting snow tends to pond water or when wind driven rain is forced into the seam. As the SSR panels deform from expansion and contraction, the side laps, end laps and flashings are severely strained thus creating openings which can allow wind driven rain to enter the roof system. Panel deformation beyond its water-tightness capability, along with outside and inside pressure changes can also cause severe leaks.

Two types of metal roofs exist utilizing standing seams; Architectural and Structural. Architectural SSRs are specified for roof slopes of 3":12" or greater. Most of these systems need some form of decking to support the panels. The concealed clips are not designed to allow expansion and contraction because they are used on short runs of up to 60 feet. The female joint in the standing seam needs no sealants because of the steeper slopes. The architectural standing seam roof sheds water well. Structural standing seam roofs are designed for ¼":12" slopes. The roof spans from purlin to purlin eliminating the need for a deck. The female corrugations have factory applied sealants and the metal panels are seamed together. The fastening clips inside the seam allow the roof panels to expand and contract during temperature changes. A sliding portion of the clips allow the roof to move on buildings much wider than those covered with an architectural standing seam roof. Because of the differences between architectural and structural SSRs it is important to distinguish the different roof types.

The follow criteria for approval of a 1-10 year joint warranty must be met prior to starting the project.

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Technical bulletin continued

STANDING SEAM ROOF CRITERIA

The contractor/applicator must identify if end laps have pre-slotted holes on the lower panels, along with blind rivets, which apply holding power but is intended to allow the panels to slide past one another. This design often places extreme stress on sealants between the panels at end laps. **ATTEMPTS TO SEAL THESE END LAPS MAY BE DIFFICULT OR IMPOSSIBLE TO SEAL. STANDING SEAM METAL ROOFS WITH THIS TYPE OF HORIZONTAL SEAM ARE NOT WARRANTABLE.**

- Roof slope MUST be a minimum of ½" per foot. The primary concern is to make sure all water will be removed from the roof system. **NO PONDING WATER** or bird baths will be permitted.

- Any roof having end laps with end backup plates/cinch straps, are not acceptable for Joint warranty.

- All end laps require embedding Spunflex II joint tape in Benchmark base coat or Rapid Roof III base coat at a rate of 1.75 gallons/square followed by an additional .75 gallons/square on top of the fabric. Once dry apply Benchmark top coat or Rapid Roof III top coat over the base coat at a minimum rate of 1.9 gallons/square. Refer to the MR system specification sheet, section 3.03 for specific application details.

- All Spunflex II joint tape must be completely embedded in coating up the side of the rib as far as possible. On raised rib seams the fabric may be terminated on the high point where the flat area meets the vertical seam.

- Pull test should be utilized prior to any metal restoration applications.

- For all vertical seams (any kind of Standing Seam roof system) should have Kwik Kaulk applied to any crimped area. NO fabric or butyl tape should be used in this area. The use of butyl tape is not recommended on a standing seam roof, since this is the cause of many leaks in current Standing Seam roofs already. The use of fabric and coatings on standing seams can cause small fish-mouths that either wick water through wind driven rain or through negative pressure from within the building. Leaks in a vertical seam are some of the most difficult to trace and after the application of fabric, these leaks will become impossible to track down. The use of Kwik Kaulk is recommended because it can bridge any areas in the seam that was not crimped correctly or has opened after years of stress. Coating alone will not bridge these gaps.

- Fastener grade is not recommended, because there is a chance it will sag since it is not designed for horizontal surfaces, but can be used on all exposed fasteners as with the MR system.

- For horizontal seams, end laps and field flashed areas, it is recommended to follow the MR specification sheet.

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