

Dave's top 10 single-ply errors

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By: Michael Russo

One of the nice things about writing for a roofing magazine is that you're typically hanging around with people who know a lot more than you do about hands-on application techniques. In this industry you are always learning, and in RSI's case, it's usually from the best trainers and technicians in the low-slope roofing market.

Take Dave, for instance. He began his roofing career in 1973 installing hot built-up roofing. Since then, he has worked for six major roofing suppliers, most recently as one company's top specialist in thermoplastic polyolefin (TPO) and polyvinyl chloride (PVC) single-ply roofing technologies. He has inspected hundreds of roofs and is on a first-name basis with the most well respected research and development people working in the industry today.

Best of all, Dave tells the truth. He has the scoop on every TPO and PVC formulation being used today, and he isn't afraid to tell his company what he thinks will work and what worries him. This will sometimes put him in conflict with the marketing department. But most of the time, the company takes his advice.

Before passing on, Dave's father was a union roofer. He has felt the pain of sub-zero roofing installations in the Midwest and the scorching temperatures of the Sunbelt. He is also suitably grumpy — a key trait for any successful low-slope roofing inspector.

Over the past 25 years, Dave has seen a lot of good single-ply roof installations and more than a few screw-ups. We were interested in the screw-ups, of course.

Every year in the RSI's State of the Industry Report we ask our readers about the primary causes of roof failure. Their answers have been the same since we first asked the question in 1988: Poor workmanship is the primary reason that new roofs fail. Exactly what that entails is heavily dependent on system type, but the answers are certainly buried in the warranty claims archived by the major manufacturers.

It's understandably not a topic that most suppliers are willing to talk about in any detail. What we do know is that roof system failures these days are rarely caused by product deficiencies. The latest studies by the Roofing Industry Committee on Weather Issues (RICOWI) also bear this out.

Below, in no particular order, are Dave's top 10 installation mistakes in the heat-weldable category.

No. 1 — Voids in seams, where applicators started and stopped their robot welders.

No. 2 — Missing cut edge sealant, or finding sealant where it isn't required.

No. 3 — Roofing contractors who fail to probe or pre-inspect their own work before warranty approval.

No. 4 — Dirty and/or contaminated PVC and TPO membranes that have not been cleaned or were cleaned improperly.

No. 5 — Bad welds and voids at angle changes with preformed corners and pipe wraps.

No. 6 — T-joints that are either missing or installed in the wrong direction.

No. 7 — Inadequate fastening of the half-sheet on mechanically attached single-ply systems.

No. 8 — Flashings that are less than 8 inches high.

No. 9 — Hand welds that are less than the required 2-inch overlap.

No. 10 — Missing base tie-ins at roof curbs and penetrations.

We suggest that readers put together their own list — or steal Dave's — and give a copy to all their single-ply installers and foremen. After all, these are the kind of errors that roof inspectors will be looking to catch.

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