I have a problem that involves one brand of tape and a different brand of joint compound. The joint compound does not appear to be bonding properly; delamination of the tape is causing hairline cracks in the compound to form along the tape’s edge. Reps from each company have inspected, and neither company will claim responsibility, although they agree it’s not in the application either.

Sorry to contradict these sales reps (because none of the sales people I know would ever pass up an opportunity to educate the customer by telling him he’s doing it wrong), but the problem you describe can be attributed to one of several conditions that all boil down to application error, some more directly than others. First, there may have been too much water in the joint compound. This reduces the strength and bond of the material. Second, there may have been too much pressure applied with the tapping tool, resulting in a skimpy layer of mud that consequently cracked. Third, if there was temporary heat cranked all the way up to hurry the job along, it may have resulted in the compound drying too quickly due to warm draft. And finally, if there was insufficient heat, it might have resulted in cold, wet conditions that reduced bond of the compound.

I have been searching for books, journals and apprenticeship materials for plaster composition during the 1920s and 1930s. We have identified this as an era of change in plaster composition, from animal hair to asbestos as a binding agent. Historical books have identified the care a plaster worker needed to correctly adjust the proportions of animal hair due to the high costs associated with this additive, but I have not found similar information to date on asbestos additives.

I’ve made several calls to my plaster gurus and scoured our library, only to find very little on the topic of the hair and other types of binders used in plaster mixes. There have been a few paragraphs explaining that it’s very important to properly mix the binder (usually a mixture of cow, horse and occasionally even goat hair back in the good ol’ days; glass and synthetic fibers are more common now) to avoid clumping and the consequent soft spots in the plaster. There is occasional-ly mention of asbestos as an alternative, but no in-depth discussion comparing and contrasting it with the standard hair binders (which also include sisal and hemp fibers). I did learn that the overly generous use of fibers tends to gum up the works when using a plaster pump, but that asbestos tended to actually help move things along. Most of the discussion I found on the use of asbestos in plaster mixes suggests that the use of asbestos was more common for achieving fire resistance. I even ran across a description of a specific type of “asbetic” plaster in the book *Plastering Plain & Decorative*, published in 1897, describing it as very useful as a fireproof material, applied in three coats, but nothing on the proportions, mixing, etc.

I have a head of wall detail that calls for the use of spray applied fire proofing to fill in the fluted steel deck above the top track. Can that be right? —L.B, Missouri

According to AWCI’s Technical Manual Number 17, *The Design and Construction of Head of Wall Fire Restrictive Joints*, there are three methods used to cover or fill the gap at the head of wall when using a dynamic joint design: Compressed mineral wool, SFRM or fire-resistant board. However, to ensure that the assembly you intend to use meets the required resistance, best to use an already approved fire-rated system. Several independent test laboratories offer listings of these assemblies.

About the Author
Lee G. Jones is AWCI’s director of technical services. Send your questions to him via e-mail: jones@awci.org.