

Notching Guidelines

Most deck builders probably follow the IRC's familiar notching and drilling guidelines—no notches in the middle third of a joist and no holes closer than 2 inches from the top or bottom edge of a joist, for example (see 2012 IRC, Figure R502.8). But what most deck builders don't realize is that those prescriptive guidelines are intended for framing in dry locations only. The IRC is silent on this topic in the deck section, and the *Prescriptive Residential Wood Deck Construction Guide*, DCA 6, only addresses the notching of guard posts.

For any outdoor, uncovered application such as a deck, almost all lumber and connection design values, which are

based on the National Design Specification (NDS) for Wood Construction, are subject to wet-service adjustments (penalties). Prescriptive documents such as DCA 6 already account for those wet-service adjustments in their span tables and background calculations for fasteners, but not so for notches and holes. Joists and beams that are subject to repeated wetting and drying should not be modified unless it is part of an engineered design.

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Deck Stain Performance

The testing procedure [in "The Great Stain Shoot-out," Sep/Oct 2015] is interesting, to say the least. Did you test any semi-solid coatings? I have been refinishing exterior lumber exclusively for 25 years in San Diego, and over the years have tested more than 30 products in a variety of settings and profiles. To be 100% sure about coatings that I use, I have found it best to do my own testing. Even then, trying to convincingly sell my test results to clients—some of them with \$200,000 decks—is very difficult.

What I've found is that all coatings perform differently, each with its own advantages and disadvantages, and that none

of them would still be on the shelves if the product was total junk. For me, one of the most important factors in a coating's performance is the ease (or difficulty) of re-coating. Easy initial application is great, but that only happens once: with new wood. The real test is with aged wood decking, especially on decks that experience varying amounts of sunlight or foot traffic. What I've discovered after 25 years in the business is that trying to compare the performance of different deck coatings can be a very slippery slope.

Jim Grant
(from online comments)

Never Use Bleach

I was disappointed that you did not include Deck Defense (permachink.com) in your deck-stain testing. Any coating is better than none, but Deck Defense is water-based, while most of those sold at the big box stores are petroleum-based and fail quickly, resulting in another trip to the store for another 5 gallons. The cost in deck maintenance is in the proper preparation and application, not in the money spent on materials. Inexpensive materials that last only a year are no bargain when compared with expensive materials that last a lot longer.

I have also found that premature stain or coating failures can almost always be traced back to the use (or, more accu-

rately, misuse) of chlorine bleach to clean the wood before staining. Since wood is slightly acidic, stains are formulated to work with that in mind (pH of less than 7.0). But bleaches are highly alkaline, with a pH of about 12, which causes the pH of the wood surface to rise off the charts after cleaning unless the bleach has been neutralized. The result is that the stain is eaten alive from the inside and efflorescence (that white chalky stuff from suspended salts) blooms on the surface. Never use bleach. Never.

John Ricketson
(from online comments)

We want your two cents.

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