GETTING THE MOST

Out of Direct Applied Finish Systems

by Robert G. Thomas, Jr., CM D Associates

Direct-Applied Finish Systems ("DAFS") are increasing in popularity. DAFS consist of a coating system applied directly to a sheathing board. Several different types of DAFS are available. Most DAFS consist of two layers. The first layer consists of special adhesives and reinforced mesh at the joints in the sheathing. The second is a trowel-applied finish. The adhesive and reinforcing mesh are essential to keep the finish from cracking when the sheathing moves due to temperature change, moisture level change and /or structural movement.

DAFS Checklist

There are a number of factors which must be considered when using DAFS. The DAFS contractor would be well advised to carefully checkout the following items when installing DAFS.

Is the supporting framing straight? The thin sheathing and coatings used in DAFS do not allow much “give” in making up for out-of-straight framing. Unlike stucco and EIFS, which can be built-up (stucco) or sanded (EPS in EIFS), DAFS require a very straight wall from the start. The straightness of the framing is especially important with wood framing as compared to light gage steel. With wood framing, it is important to use dry, straight-grained wood so that framing has the maximum chance of staying straight as its moisture content varies in service.

Is the sheathing flat? Some sheathings are flatter than others. If the sheathing is wavy to start with, the waviness will be transmitted through to the surface of the DAFS. Since DAFS coatings are expensive, it is not economical to build them up to produce a flat wall.

Are the sheathing screws water resistant? The screws that hold on the sheathing in a DAFS are just under the coatings. If they corrode, you’ll get stains coming through the finish, especially in humid areas and along the sea coast.

Has the wall been engineered for thermal and water vapor conditions? Because DAFS are thin, non-insulated systems with the studs right behind the sheathing, the temperature of the DAFS finish in the stud area will be different from the rest of the wall. This can cause the location of the studs to be visible due to a difference in moisture level of the “cold” versus “hot” areas of the wall. The lack of a vapor barrier in a DAFS wall can make this worse, allowing moisture from behind to “telegraph” the position of the studs.

Conclusion

DAFS require good craftsmanship and proper design to perform properly. DAFS work best in mild climate areas where there is less stress on the coatings. Extra care should be taken when DAFS are used in unprotected areas such as walls without roof overhangs.

If you keep the above checklist in mind when doing your next DAFS job, you’re bound to get better results.

About the Author:

Robert G. Thomas, Jr. is a wall systems consultant. A graduate of Carnegie-Mellon University’s architecture program, he has been involved in the exterior wall business for his entire career. Formerly Manager of Technical Services at Dryvit Systems, Inc., he played a major role in establishing technical standards for the US EIFS industry.