

Five Lessons About EIFS

from the Scroll of the Annals of the Spec Master

Lesson the First

It was a breezy day in March when the Young Specifier entered the labyrinthine woods of northern Shelby County in search of his guru, the Spec Master. The Spec Master, a legend in his own mind, held in his hand a wand of power, a niblick or perhaps mashie-niblick in the old high tongue suitable for arcane pursuits.

“I have come in search of enlightenment, *lieber meister*,” said the Young Specifier. I need to have the mysteries of EIFS unfolded and explicated.”

“Art thou ready, youngling, for such deep knowledge?” A look of inner anguish burned in the eyes of the Spec Master, realizing that he could not spare his beloved disciple from unavoidable spiritual danger. “These are deep things and not all can bear them. Hast thou purified thyself?”

“I showered this morning, if that’s what you mean.”

“It will do for now. Let us begin. Wise men of yore who loved buildings sought to preserve the lore that made buildings safe and gave strength to the buildings to stand for generations, sheltering human endeavors and creating wealth. Knowest thou the name written on the cover of this codex?”

“Building Code, *lieber meister*,” eagerly replied the Young Specifier.

“A generation ago, a product for cladding buildings came from the east, across a vast sea. Great were the promises that heralded its coming. Some rejoiced at its coming, but many held aloof, disdaining it as a low thing. Alas, few studied it deeply. Men called it EIFS because its True Name was not mellifluous and few gentle persons would speak or write *Exterior Insulation and Finish System*.

Behold, EIFS took root and is now the most popular product for the integument of commercial buildings.”

“No, master, surely not!”

“Yes, youngling, it is so.” The words were uttered ruefully. After a pause, the Spec Master brought forth a copy of the Building Code from his raiment and laid it in the hands of his disciple. He spoke again in lowered tones, “Go thou and search these pages for knowledge. I will speak to thee again when thou hast gained wisdom from thy search. You will find something of great significance in this book about EIFS.”

The Young Specifier ran his hands lovingly over the worn cover and well-thumbed edges of the book. He arose and left the Spec Master who was intoning a mantra: “more loft, more loft, ...”

Lesson the Second

Some days later the Young Specifier returned. He was frowning, his brow was furrowed, and he spoke with no little irritation: “You sent me on a wild goose chase, Pops. There’s nothing in the Book of the Code about EIFS at all.”

“*That* is the something of great significance, bubba.”

The Young Specifier sat down abruptly and covered his face with his hands to hide his shame at his anger as the full import of this truth broke upon him. “Please pardon my impatience, *lieber meister*. But can you tell me why there is no mention of the product? And if it be not mentioned in the Code, how then may people lawfully put it upon buildings?”

“As to why EIFS is not mentioned in the Book, that is a great mystery that is not yet fully revealed. As for using it, behold, men

have developed ways for EIFS to be accepted by those who enforce the Code.” The Spec Master looked into the distance and asked, “Knowest thou of model code agency evaluation reports?”

“I have heard the term, but have not read them.”

“When people saw that EIFS was to be desired, they went unto the keepers of the Code and cried to them to be allowed to use the new product. The loremasters considered together and set the producers of EIFS certain tests to prove the worthiness of EIFS. The producers went away and behold they came back with evidence that their products had met the tests under certain conditions. The loremasters said, ‘It is enough that we will recommend that code enforcers permit the use of EIFS, but we will not speak of EIFS in the Code.’ And there was great rejoicing among the producers, but dismay among the designers of buildings.”

“Dismay, *lieber meister?*”

“The testing was done by various methods, and the results differ. Lo, one product may be used only if it is put over 5/8 inch Type X gypsum sheathing, where another product only need have 1/2 inch regular sheathing. A certain product may be used only if the interior walls have 5/8” Type X gypsum board, but another may be used with 1/2 inch regular drywall. Some products must have both 5/8 inch Type X gypsum sheathing and 5/8” Type X gypsum interior wall board. Thus there was much confusion.”

“And how shall a designer know what related products to specify?”

“Thou must read the model code evaluation report for every producer of EIFS that thou art considering to be specified. Other requirements of significance are contained therein.” The Spec Master breathed a heavy sigh and did not look at the disciple when he spoke again, “Knowest thou the import of the word *noncombustible?*”

“Verily, it means that a construction product so described burneth not. Thus, assemblies of concrete, masonry, metal, glass are permitted in use in exterior walls for buildings for which the Code requires non-combustible construction.”

“And does EIFS burn?”

“The surface skin is like unto acrylic paint and, having organic content, I believe would burn although there is not much fuel in such a thin film. Below the textured finish coat is a cementitious base coat that does not burn, but it is thin. Below that is a layer of foam plastic insulation made of petrochemicals that burns readily. The insulation is attached to substrates with an adhesive and I do not know if the adhesive is combustible.”

“A carefully considered answer, I am pleased,” beamed the Spec Master. “So, if the largest component of EIFS will burn, is it noncombustible?”

“No, *lieber meister.*” The Young Specifier was confused. “How then, do we see EIFS on buildings required to have exterior walls of noncombustible construction?”

“Thou rememb’rest how Yeshua of Nazareth told his disciples that Moishe permitted divorce for their forefathers because of the hardness of their hearts but that such divorces were not the will of the Father?”

“Yes. Dost thou mean..”

“The loremasters have decreed in the evaluation reports that EIFS can be permitted under certain conditions, *even though it is not written in the Book of the Code.*”

“But surely the cementitious coating is not sufficiently thick to prevent ignition of the foam plastic insulation when exposed to flame or even high radiant heat energy.”

“It is not,” said the Spec Master with some finality. “But the testing assayed by the producers says that although it burneth a little, it burneth not much and so are the loremasters partly satisfied, at least enough to

to allow EIFS to be used on otherwise non-combustible construction, but not enough to put EIFS into the Book of the Code.”

“Behold, I will go and read the tales of the testing and come again for more wisdom, but just now surely my brain overfloweth.”

Lesson the Third

When the Young Specifier returned, the Spec Master’s heart was gladdened and he discoursed again, beginning with a question.

“What do men mean when they speak the word *system*?”

The Young Specifier was surprised by this question and thought deeply before replying. “Surely a system is a group of things acting together as a unified whole.”

“If I select things from various manufacturers and put them together as a system, who is responsible for the behavior of the system as a system?”

“Why, thou, *lieber meister*.”

“And if the constituent parts be sold in the marketplace by a merchant as a system and he provides all these parts and puts his mark thereon, who then is responsible for the behavior of the system?”

“Why, the producer of the system and its parts.”

“I see that thou hast not read the warranties for EIFS, bubba.” Hereupon the Spec Master put an ornate document with legal-looking border decorations and fine print into the hands of his disciple.”

“But the word *system* is part of the True Name of EIFS. It is the S,” protested the Young Specifier not looking at the document.

“What is the purpose of EIFS?”

“EIFS is like unto skin, its purpose is to keep the wind and rain from the interior of the building.”

The Spec Master chided gently, “You do not speak with enough specificity. The pur-

pose of EIFS is to prevent the passage of wind and moisture through itself to the interface with the substrate.”

“Yes, that much I see.” The Young Specifier looked upon the warranty, reading it through once, twice, a third time. “But, but, but, this warranty document does not say that the system will prevent water from passing through it *even if it be installed per holy writ from the manufacture!* Do they not know that roofing and below-grade waterproofing manufacturers so warrant and attest unto their systems?”

The Spec Master smiled beneficently, “Now thou knowest that what is not written can be as important as what is written. The Wise term this concept *Missing Factor Analysis*. Go thou and meditate thereon.”

Lesson the Fourth

“I have been thinking, *lieber meister*.”

“So far, so good.”

“If the integrity of the outer covering of EIFS, the crust so to speak, be breached, how then will the system-that-is-not-a-system behave?”

“Now art thou entering into deeper things.” The Spec Master was obviously pleased with the Young Specifier’s question.

“Doth the cementitious coating within the system (for so it is, no matter what weasel words gainsay it) readily pass moisture in liquid or vapor form? What is written in the product catalogs?”

“Those that I have read state that the cementitious base coat is waterproof. Of the passage of water vapor through the system, little or nothing is written. Using your *Missing Factor Analysis*, methinks this absence should be a red flag unto the wise.”

“Doth expanded polystyrene plastic foam insulation, commonly known as ‘bead board’ insulation absorb water?”

“Yes, O great one. There are little spaces between the beads that can receive water. With some boards water can enter at one end and it will come out the other, much as a sponge would do although it hold not so much water as a true sponge.”

“Then if water get into the *system*,” the Spec Master gave the word an ironic emphasis, “through, say, a failed joint seal, how then shall it pass out of the *system*? How much water can a leaking window or hose bibb put into the *system*? Is it possible for the insulation to dry out?”

“I know not how it could.”

“Me neither.” After a pause the Spec Master continued. “What is the purpose of the insulation part of the system of EIFS?”

“It is to retard the movement of heat energy in both directions: to keep the interior of the building warmer in the winter and cooler in the summer. Shall I quote unto thee the Second Law of Thermodynamics?”

“I know thou didst learn of the Second Law in thy youth, and thou speakest rightly of the insulation. If the insulation contain water, how is the efficacy of its thermal resistivity, which men call R-value, affected?”

“It is surely diminished.”

“And can it be restored? And if the insulation hath lost its insulationness, is it worth anything except to be thrown out and trodden under landfill?”

“I know a rhetorical question when I hear one, much less two. I go now but will come yet again,” said the Young Specifier.

Lesson the Fifth and Last

The Young Specifier came again, but with disillusionment dragging at his feet. He slowly wended his way unto the Spec Master. When he arrived he sat many minutes before speaking. The Spec Master contemplated his wand of power and the mystic significance of certain circular receptacles put into close-cropped greensward.

“Once did I think that EIFS was a great boon, thinking it waterproof, capable of extending great surfaces with few joints, preserving warmth, and being code compliant.”

“And what hast thou learned about EIFS?”

“I have learned that EIFS is like unto kudzu, O great guru.”

“Like kudzu, dear boy?”

“Yes, master.” Here the Young Specifier held up his fingers as he made his points: “It pops up everywhere, it is impossible to get rid of, and it isn’t good for anything.”

At these words, the Spec Master arose, walked behind the Young Specifier, and draped his windbreaker upon the Young Specifier’s shoulders. Then, with his wand of power he spoke, “My joy is complete and now I can retire in good conscience. I charge you to be faithful and true to the Way of the Specifier.” At this, he turned, picked up a long bag containing several other wands of power, and went away, his face shining with bliss and peace.

The End