We've looked recently at the erosion by the new building codes of fireproofing as a requirement, so we decided to canvas contractors listed in the 2003 edition of AWCI's Who's Who in the Wall and Ceiling Industry as offering fireproofing, to ask about the challenges they were experiencing on the job. Of the 20 canvassed, a full 60 percent said they rarely do fireproofing because there is little demand, or because they cannot compete against larger local companies or "companies that travel from town to town and do nothing but fireproofing. It's hard for us to compete with them," said an Alabaman and two others. "It's like going into business every time we get a job," he adds, an idea echoed by a colleague from Illinois: "We haven't been involved in the fireproofing business for probably 15 years. It seems to be a business that we can't compete in, cyclical in nature with concrete buildings becoming popular and so the need for fireproofing dropping. When the market picks up again, all our equipment is outdated and outmoded."

But There's a Duct in the Way

But for those who do fireproof, challenges do exist. A key common thread
seems to be difficulty accessing areas needing to be sprayed. Almost all contractors mentioned variations on the same theme.

The most common (4) was access being difficult because of poor scheduling allowing other trades to install ahead of the sprayers. According to an Indianan, “Coordination is the main problem, to get in before the other crafts, and on such issues as keeping people off the roof when we’re doing roof applications. They should only have their brackets and carrying-type devices attached—hanging rods, wires and so forth up. But they all want to have their pipes and ductwork and everything else up.”

“We don’t always have a direct line of communication with the other trades and so coordination becomes difficult, even though it is vital the fireproofing be applied in the proper sequence of construction,” agrees a Washingtonian.

Sometimes poor scheduling isn’t a general contractor’s error but an architect’s or building inspector’s. “Cowboy Town in Alexandria, La., was a tough one,” explains a Missourian, “as building inspectors suddenly required fireproofing after the ductwork and pipes were in place, yet it was a fast-track project that had to be completed within three weeks. We worked around the clock and completed a $500,000 project in three weeks.”

“A large nine-story apartment building in Champagne was difficult in terms of access to hard-to-reach areas,” adds an Illinoisan. “We were not able to get in early enough, and there was a lot of ductwork, piping, etc., in the way. The architect had omitted fireproofing in the specification and so the fireproofing contract wasn’t even let out until late in the process. We were doing a lot of other work on that building, so we were able to anticipate some of the problems and factored them into our bid. We didn’t make much profit on that job and were glad to get it done.”

Otherwise, access can be a challenge because the space being work is small, as
two Michigan contractors noted. Both dealt with this by “bidding those jobs high,” as one states, and “We take a look at the job, figure how much the space issue is going to slow us up and reduce our production, and then build that into our costs,” the other explains.

Access can sometimes be hard because of volume traffic, as a Floridian claims, a point echoed by a Californian who worked on “San Francisco International Airport. It was a $7-million contract with a lot of different phases over a three-year period in a working airport that made it difficult to move around because of all the traffic: airplanes, cargo, people. We managed it as best we could, focusing on sending daily activity instructions to our crews, what they should do, step by step, at the beginning of each day.”

Then there are access problems because of location, as a Washingtonian reports concerning “A special offenders’ jail, the Washington State Penitentiary, on Seal Island. The difficulty is that barge transport is required to reach the site. Our day starts in a parking lot at 5:30 a.m. where we do a tool and material check and then climb on a bus for the trip to the barge. We stay in the bus during the 35-minute crossing and then drive 15 miles to the isolated site on the island for an 8 a.m. arrival. Then at 3:30 p.m. we do it all again in the reverse direction.”

Difficult access also covers jobs like fire-
proofing a viewing box 100 feet up with sloped floors, massive cantilevered steel trusses, etc. The Texan contractor had to screen large areas of the stadium so that the high winds at that height and exposed position didn’t blow overspray over half the stadium.”

Two fireproofers felt gauging the thickness of the material consistently was the main the challenge. “If you spray too much, you’ve sprayed your profit away,” notes an Alabaman. “If you spray too little, you’re in danger of being called down on final inspection, which would be a disaster.”

Jumping the line

Scheduling is a recurring issue. “Currently, we’re on the largest fireproofing project we’ve ever undertaken,” says a Floridian. “The Miami Performing Arts Center, a contract that is worth a little over $1.4 million, with more than 40,000 bags of material and a time line of about a year. Having the manpower available to keep up with the schedule and not become buried when they open up a huge area for us to work on is a major concern. Luckily, so far, they have been dragging their heels, letting us off the hook.”

Echoing the complaints of other contractors about other trades being allowed in before sprayers, a Michigan man says that “Nowadays, GCs are not scheduling properly. They don’t seem to know what they are doing: They allow duct work to be put into place, sprinkler heads, insulated pipes, masonry, drywall partitions, stainless studs, etc. We either have to cover them or clean them. That can double the amount of work we have to do and wipe out any profit. A lot of times we don’t even know a job has been started until they call us in. Wherever possible, we drive by and see how upcoming jobs are progressing so we can be prepared.”

Dealing with Paperwork, People and the Weather

For the Floridian working on the high profile Miami job (a budget of half a billion dollars and the size of three city blocks), the actual challenge he is facing “isn’t the size of the job, but the size of the paperwork. They’re up to about 5,000 RFIs on that job, and they are not even a third of the way through yet—too many chiefs and not enough Indians, or a lot of people with a lot of time on their hands who sit around and read too much [crap], to be blunt! Simple things like four bolts tying down a base plate to a column, and three of them had an inch of thread showing through the top, and the fourth had only three-eighths of an inch of thread showing—honestly, it’s stuff of that magnitude.”

Three contractors mentioned logistics being an issue in areas where people are in the work area. A Floridian working on an expansion of the University of Florida football stadium, which is on campus,
reports his company “had to work after hours, dropping trucks on site in the evening, unloading them, storing and covering the materials. We also had to make sure we didn’t spray the students when they were walking by. All this was done around the football schedule, too, so the site had to be clean on Saturdays when they had a home game.

A Missouri contractor had to “follow an asbestos abatement team one or two stories at a time through an occupied, 52-story project in New Orleans. Each story was evacuated, sealed off, abated and then sprayed. Sometimes carpet was left in place, forcing us to do extra preps.”

“Tenant improvement areas require a lot of masking,” reports an Arizonan, “and a lot of coordination to do before you can get in there and take care of them. Probably the toughest one we did was a law office; we had to fireproof the racks that the law books were being supported by, and that was challenging, as anyone who has tried to fireproof 5/8-inch threaded rods knows. We had to build them up 360 degrees with a half-inch of fireproofing plaster. That was tricky.”

Two contractors talked of weather being a major impediment at times. “We just finished a $700,000 job up in Tennessee at a big diamond turning and testing facility within the Oakridge National Laboratory,” states a Floridian, “which is where they make the atomic bombs. One challenge was the location being so far away made it hard to control progress at the job site—not to mention the absolutely atrocious weather conditions that we had to deal with this past winter.

“We had to contend with rain, snow and ice when the building wasn’t closed in. We created a large, Visqueen enve-
lope by strapping down 15-mm poly and taping everything together in each area we were working. We were then able to heat not only the machines, but also the steel itself, which has to remain at 40 degrees minimum for 24 hours before and after spraying. We also had to keep the machines heated, because the material is mixed with water and will freeze if you don’t watch out.”

**How long Is Your Pipe?**

An Illinois contractor wins the prize for coming up with the most unusual challenge. “The Chicago postal facility was a very large project, spread out over a large footprint, including over an operating railway line. The challenge was figuring out what products needed to be used where, and the logistics of spraying three different W.R. Grace products on any given day—low-density MK6, medium density 106 and the high density 146—through the same 1,000-foot hose.

“We became experts at estimating how much of each product was in the hose and when to quit adding new mix, when to push the next product behind it, and when to push the third product behind it, so we didn’t waste a lot of material in the process. Generally, we would start with the heavy stuff first, because it doesn’t dry as quickly. Then we’d go to the lighter stuff, which is easier to work. We were aware of the potential for dissimilar materials to set or become hard in the hose. Pushing a sponge or a plug of retarder to prevent that from happening is advisable. The potential for clogs developing in such a long hose is always great.

“We had another situation in which we had to figure out how much the hose weighed with the material in the line, for fear of overloading a piece of equipment.
So, you do need to do some calculations that are not exactly and directly related to the fireproofing operation itself, and not something you learn in fireproofing school.”

**Architects Again**

It seems two of the contractors interviewed had more to say about architects falling short. An Alabaman insists that “One thing that would help the industry more than anything else is for architects to be very specific about what they want. But because many architects don’t know much about fireproofing, they just say ‘fireproof the beams and columns according to codes’ without the hourly rating spelled out. Contractors then have to check the codes for the various building types and figure out how thick they’re supposed to spray in each area and what the hourly ratings require on bends, columns and decks. The problem with this is that bids then vary widely because people interpret the drawings differently.”

A Missourian had a similar complaint: “We have two issues with fireproofing these days. One is the new code, which reduces fireproofing, even eliminating it in some cases. And the other is the restrained and unrestrained issue. I wish we could develop a code of conduct among all the fireproofers so we bid on the basis of unrestrained conditions, which increases the bid for the fireproofing. But a lot of people play with the issue because they can get by with it...
often, as architects and others don’t understand exactly what they are getting. They will ask for a two-hour construction when they really want a two-hour beam. So contractors figure it on a two-hour restraint assembly that really provides a one-hour unrestrained beam rate.

“So if I bid against someone who figures it this way, yet I bid it the way it should be, obviously I’m not going to get the job because my bid comes in higher for a higher fire resistance rating. We have to figure out what the other contractors are doing. You won’t get the job if everybody is bidding it as a restrained condition and you’re doing the right thing. This whole system is forcing everybody into the lowest common denominator. It would be to the advantage of all applicators to bid as unrestrained, but all it takes is one renegade to lower the standard.”

So next time you see a fireproofer, cut him some slack. If you are another trade or a GC, let him do his job before you crowd him out. If you are an architect, do him a favor and write the specs yourself-don’t expect him to do your job for you. Then maybe fireproofers won’t have to walk around with the idea that “We’re not always the most liked contractor because we are messy. It takes a certain mindset to deal with the fact that one is not well loved,” as one Illinois contractor remarked.

About the Author
Steven Ferry is a freelance writer based in Clearwater, Fla.