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**BILL HARRIS,
MANAGING PARTNER AND CO-FOUNDER OF
MASONRY FIREPLACE, INC.**

Turning Up the Heat:

Prefabricated Masonry Fireplaces Provide Appealing Alternative

Offering both warmth and charm, fireplaces are often the centerpiece of a home, providing a prominent and welcoming invitation to sit, relax and visit.

Enter the **Mason-Lite** modular concrete fireplace from Masonry Fireplace Industries, LLC (MFI). Constructed in the field using prefabricated concrete firebox components with factory-built chimneys, **Mason-Lite** fireplaces are lightweight and offer the look and feel of a true masonry product. However, as an alternative product, these modular fireplaces are not covered by existing codes or standards for fire resistance and seismic conditions, thus providing no predetermined way to verify the product’s reliability, strength and performance.

With interest in their product growing in the home building community, MFI called on ICC Evaluation Service® (ICC-ES®), a subsidiary of the International Code Council® (ICC®). ICC-ES provides technical evaluation of building products, components, methods and materials. The organization helps manufacturers such as MFI by producing technical reports, which verify that their innovative products meet code requirements and warrant regulatory approval.

Bill Harris, Managing Partner and Co-Founder of MFI, says, “We’re the first fireplace manufacturer to work with ICC-ES to develop an acceptance criteria of this magnitude. The multifaceted development process gave us a unique opportunity to appreciate the strength of the code enforcement process and work extensively with industry and the public as we ultimately defined a new acceptance criteria.”

Proven Performance

Mason-Lite modular concrete fireplaces are constructed with precast, interlocking refractory blocks secured to each other using **Mason-Lite** mortar.

The lightweight concrete blocks are unique in that they are about half the weight of real masonry blocks, with high heat resistance. With proper structural design, the fireplaces can be constructed without footing or foundation on a second floor. The precast modular



product can cut installation time. The fireplaces are designed for use with solid wood logs, LPG or natural gas log lighters and decorative gas logs. Every fireplace system comes complete with all parts necessary for the assembly of a complete masonry firebox unit.

With no criteria in place for the prefabricated fireplaces, MFI worked with ICC-ES to define the testing methods and performance criteria necessary to ensure that the construction and performance of the **Mason-Lite** fireplace, from the base to the firebox hearth, complies with the 2006 *International Building Code*®, the 2006 *International Residential Code*®, and the 2006 *International Fuel Gas Code*®.

In developing acceptance criteria, ICC-ES seeks input from experts in the building industry through open public hearings conducted by an independent committee (the ICC-ES Evaluation Committee) that is composed of representatives of governmental jurisdictions that actually enforce building regulations.

Of particular concern for code officials on the west coast was the seismic integrity of the prefabricated fireplaces. To ensure structural integrity, **Mason-Lite** had the fireplaces tested for resistance to seismic loads following AC156, *Seismic Qualification by Shake-Table Testing of Non-Structural Components and Systems*.

The seismic testing requirements, along with structural testing and performance criteria, were collected into new acceptance criteria: AC375 *Field-constructed Fireplace Systems Using Prefabricated Blocks*.

Harris says, "Earning ICC-ES recognition meant we met the seismic standards of the International Codes, a critical criterion to our customers along the west coast. Without ICC-ES recognition, we wouldn't be able to have distributors install the fireplaces throughout the western states."

Through the ICC-ES process of developing technical criteria with input from interested parties and then issuing ICC-ES Evaluation Reports based on those criteria, ICC-ES assists a product such as the **Mason-Lite** fireplace to enter the market successfully. Furthermore, there is an understanding that the process for evaluating all products is consistent and fair, transparent and from a third-party independent evaluation service.

Once AC375 was approved by the ICC-ES Evaluation Committee, MFI submitted test data for the **Mason-Lite** product to ICC-ES for evaluation. MFI received ICC-ES Evaluation Report ESR-2401 for the **Mason-Lite Modular Concrete Fireplace** on September 1, 2008, generating excitement from developers and homebuilders, and earning approval from building departments.

Desert Directions

The multimillion dollar Sunrise-designed homes of Toscana located in Indian Wells, California incorporate the design traditions of Italy, Spain and early California. Estate homes range in size from about 2,800 square feet to 5,400 square feet—each including at least three fireplaces.

"The developer really liked the idea of our lightweight fireplaces for cost and flexibility in installation on second stories," says Harris. "However, the building department adamantly required an ICC-ES Evaluation Report before they would approve plans."

MFI's largest distributors are currently located in California. Capo Valley Fireside, for instance, one of the premier fireplace, barbeque and outdoor living service providers in Southern California, has crews installing the **Mason-Lite** fireplaces weekly.

Eric Peterson, owner of Capo Valley Fireside, says, "The ESR-2401 from ICC-ES has made a huge difference to our customers. Architects, designers and general contractors now have the confidence to call for the **Mason-Lite** fireplaces knowing local code officials will immediately approve them. Homeowners have full confidence in the final product."

Currently, MFI is recognized for three different sizes of 39-inch, 44-inch and 49-inch fireplaces. The 39-, 44- and 49-inch models have been evaluated by ICC-ES and are covered in ESR-2401.

Harris concludes, "We believe our product is a powerful alternative to costly, hand-constructed masonry fireplaces. But without an ICC-ES Evaluation Report, we weren't going to get a chance to prove it. Now our fireplace products are hot. Developers can create instant ambience of luxury for a house with consistent quality at an affordable price that is easy to install—and are assured our products meet the most stringent codes and standards."

To find out more about this product, view ESR-2401: **Mason-Lite Modular Concrete Fireplace**, issued on September 1, 2008. All ICC-ES Evaluation Reports can be accessed and downloaded free of charge at www.icc-es.org/evaluation_reports and are readily searchable based on attributes such as product type, manufacturer or report number.

This article is intended to provide information on a new or innovative building product or system for which an ICC-ES Evaluation Report has recently been issued. It should not be construed as a product endorsement or a recommendation for its use.

