Preface

An expert is an ordinary man who- when he is not home – gives advice.

Oscar Wilde

Zinc is the mysterious metal used in art and architecture.

In the United States, it is a paradox. On the one hand, it is considered an Old World metal, used for centuries across Europe. Paris is defined by the roofs of zinc that blanket the city. Yet it is relatively new to North American architecture.

As a metal of art casting or fenestration, little was known until the early 1990s. Sure, we knew of the process of dipping steel in a molten jacket of zinc. Hot-dipped galvanized, a strange fondue for metal, is a process that is well known, but not always understood.

The leading zinc mines that supplied the world were once in the middle of the United States, a region with the town of Joplin, Missouri, as the center. Most zinc mining has ended in the area, but in the late 1800s and early 1900s this was the epicenter of zinc. Millionaires were made by the dozens as the area was tunneled out like a giant anthill.

In North America, the sheet metal industry, art casting industry, and design community knew little about zinc. Publications and training documents throughout the architectural metal industry made no mention of zinc. The old catalogs called the metal *white bronze,* perhaps attempting to elicit a feeling of noteworthiness by taking on the name *bronze*. Metal foundries, art schools, and metal workers in the United States lacked any real knowledge of the metal. With the exception of galvanizing, the metal was all but forgotten after the early part of the twentieth century.

When I first started work at Zahner, a 125-year-old metal fabrication company located in the Midwest, zinc was not known as an architectural metal. We did not stock the metal, nor was it specified in any industry publications. We worked with steel, terne, copper, aluminum, stainless steel, and lead, but not zinc. One of the first introductions to the metal occurred during the restoration of the Folly Theater, a turn-of-the-century theater built in 1900. When the workers removed parts of the metal cornice and decorative metal baluster in 1979, they had difficulty determining what the metal was. This metal had lasted 80 years and still looked in good shape. It was silver under the paint, so it was not copper. It was not magnetic so it was not terne-plated steel or galvanized steel. It was heavy, so it wasn't aluminum, and aluminum had not been in common use by 1900. The pieces were spun and assembled in sections by soldering. It was not any metal we were familiar with. It was zinc. From the *old country*.

The other connection to zinc goes back 125 years. Andrew Zahner, my great grandfather, started this metal company I work for, in Joplin, Missouri, in 1897. Back in the late 1800s, this region in

southwestern Missouri, on the edge of the Ozark Mountains, was the site of one of the largest mining operations in America – first for lead used to make bullets and later for zinc. Zinc, known in the area as *jack*, made the region one of the wealthiest in the United States. Every major railroad at the time went through the Joplin region to transport the ore around the United States and to ports to supply the European market. The ore was of such high quality that the Europeans purchased it from Missouri.

This booming region attracted a young Andrew Zahner, and he started a small metal fabrication firm to produce cornices and other decorative features for the wealthy merchants in the area.

Andrew Zahner surely knew about zinc.

The boom / bust cycle eventually hit the Joplin area in the early 1900s, and Andrew moved the company to its current home in Kansas City. The knowledge of zinc was left behind with the dying mines of the central United States. Now, 125 years later, I write a book on this metal, zinc. It is unfortunate that I did not have Andrew as a resource.

Over the last couple of decades, we have worked with the metal zinc on numerous projects. We have expanded our knowledge of the metal and have uncovered many new and interesting ways of working with zinc. We have created new patinas and surface enhancements, and we have explored casting. The more I work with the metal zinc, the more I find it an intriguing material of design.

Working with my daughter Kat, who operates Zahner Metal Conservation, restoring 100-year-old zinc statues and statuettes gives a deep appreciation for how the artist worked with the metal and produced amazing detail using casting techniques that have all been forgotten.

This book, the fifth in the series on metals, is intended to spark the interest in the metal zinc and explore the possibilities it has to offer the designer and the artist. The next pages should help to unravel this interesting material of design and introduce the reader to how this metal will appear and function.

L. William Zahner