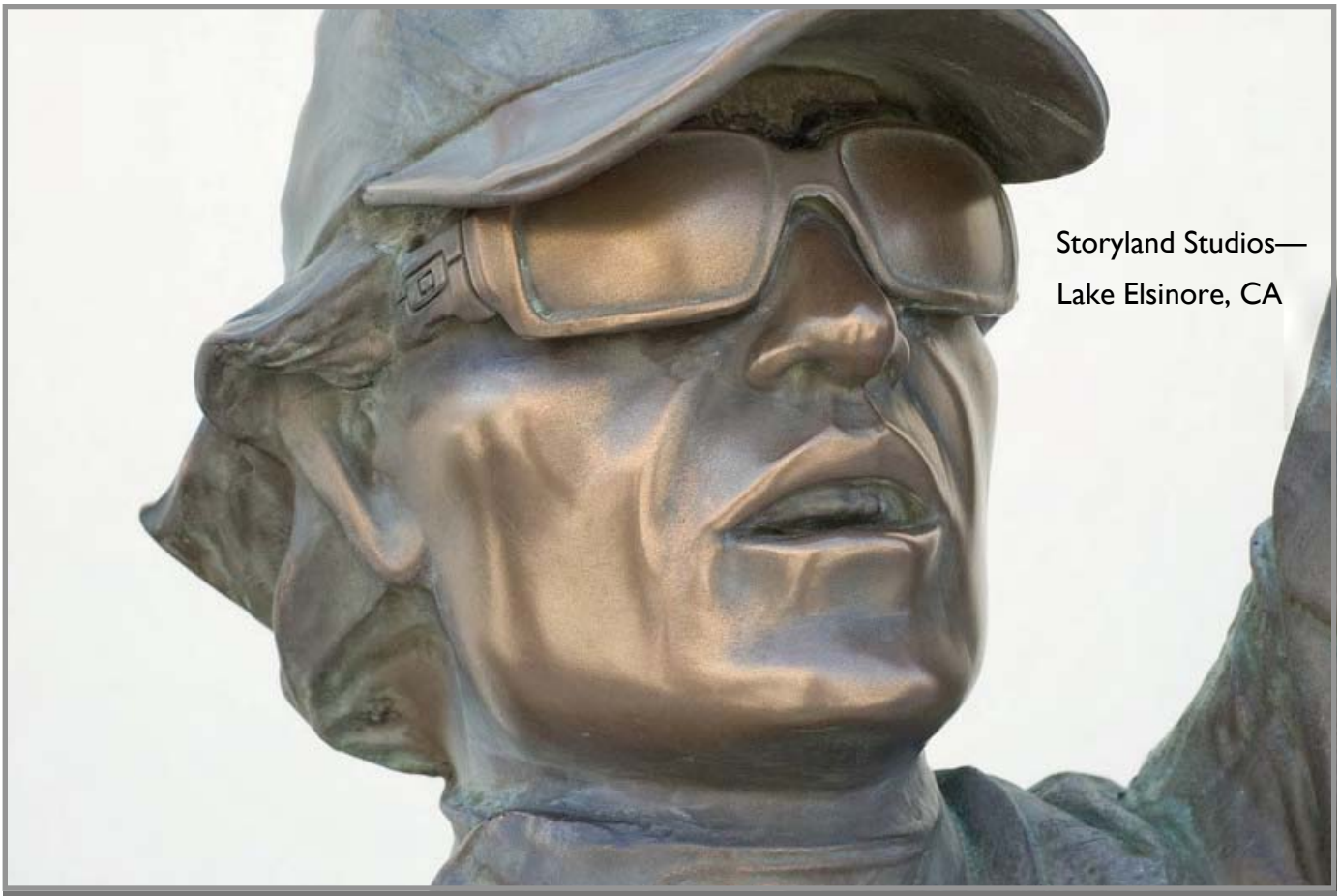

Storyland Studios—
Lake Elsinore, CA

LuminOre® Composite Metals

Changing the way the World Works With Metal™

Tumasek Pewter– Malaysia

Product Information

LuminOre

Changing the Way the World Works With Metal

Overview

Storyland Studios—Lake Elsinore, CA

LuminOre, Incorporated, controls the master license for a unique, patented cold metalizing process, that is more environmentally friendly, and has universal uses.

Because of the unlimited possibilities for this technology, we have a responsibility to assist others with the development and implementation of applications.

Our goal is to be perceived as a company with a policy of accessibility and cooperation.

We are committed to becoming the leader in composite metal manufacturing, through the continuous refinement of the LuminOre® process, and by creating structured partnerships with key industry leaders.

Changing the Way the World Works With Metal ™

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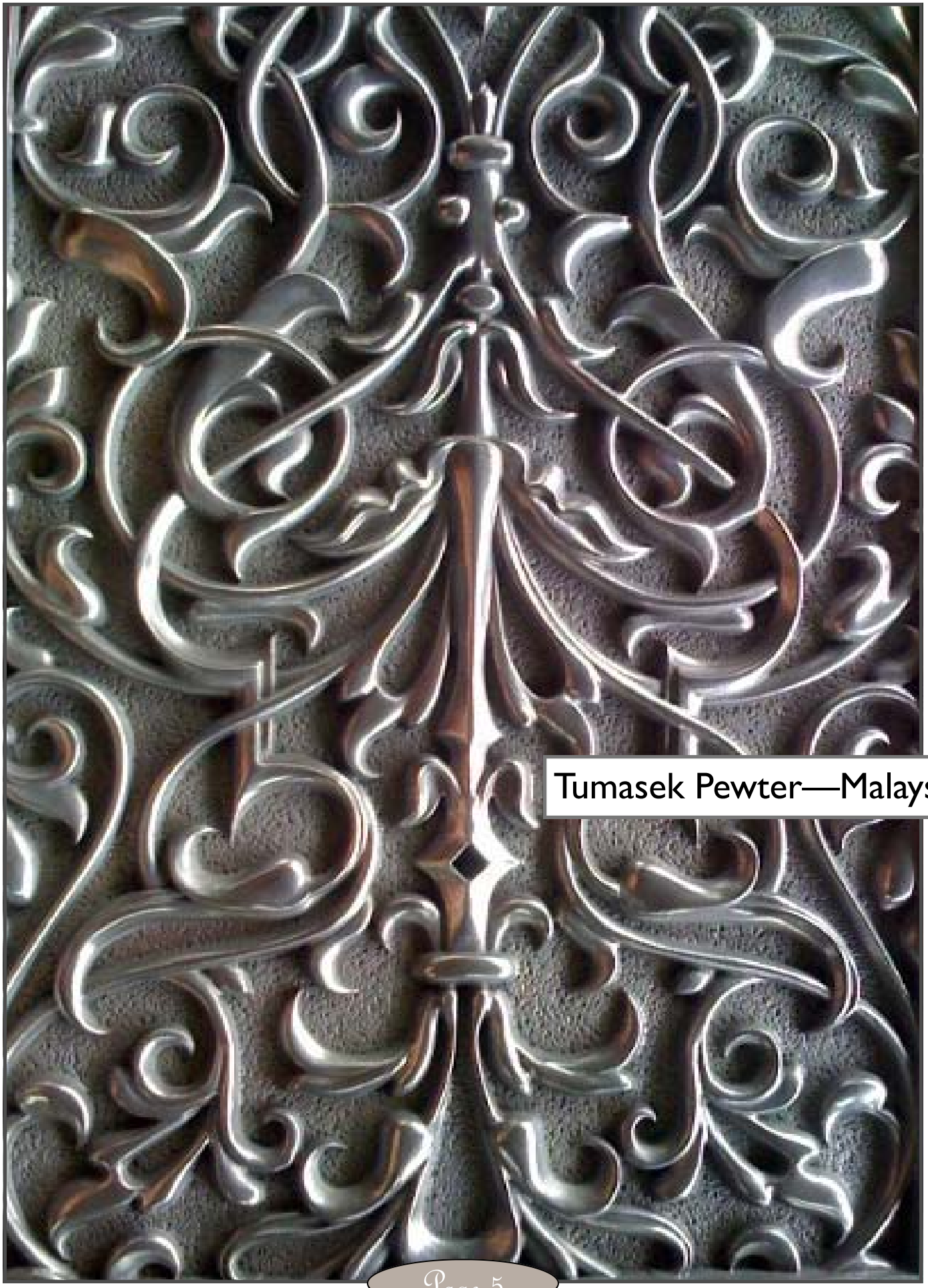
Background

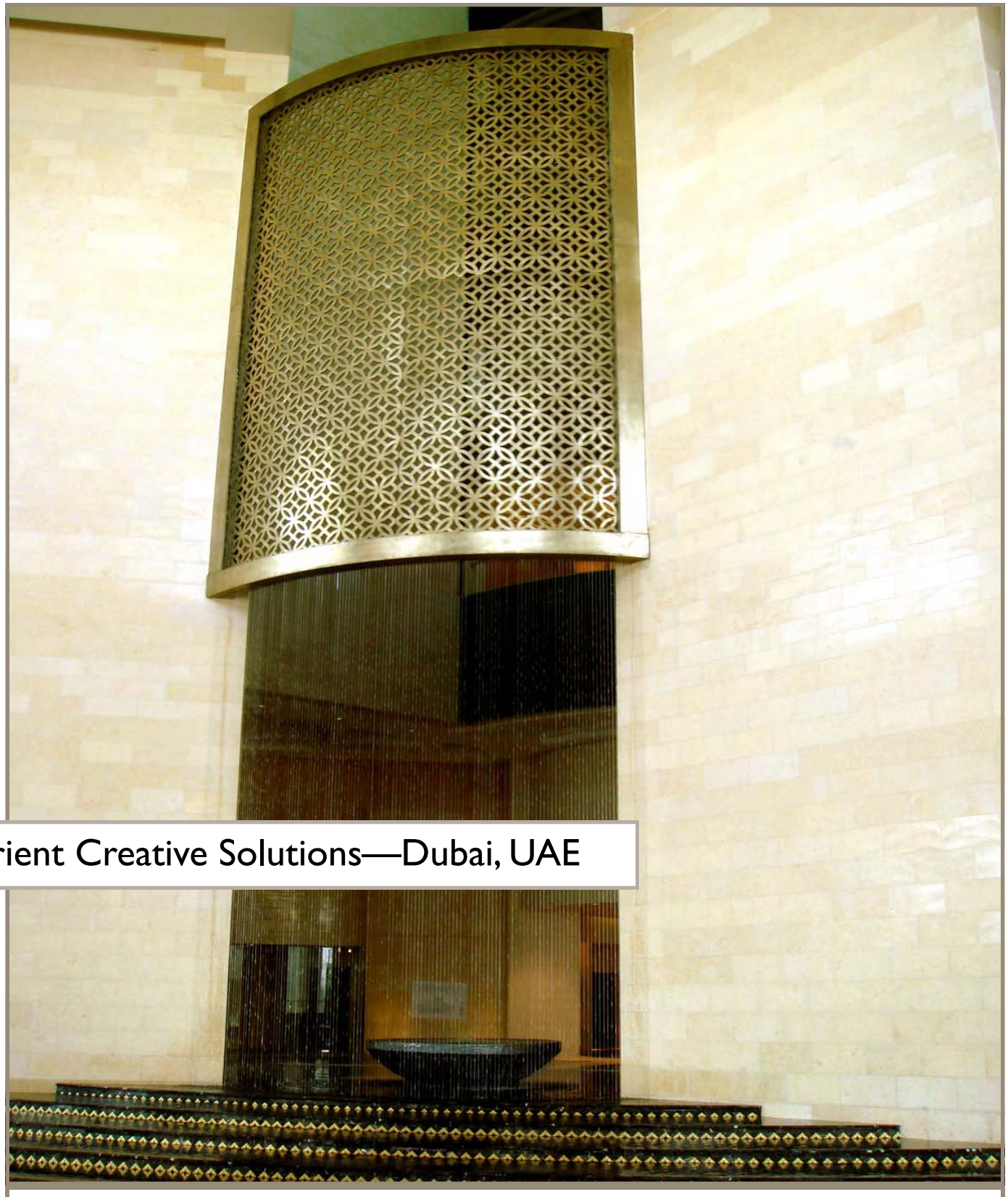
A new industry of cold sprayable metal technology has arrived, that not only "changes the way the world works with metal™" but has a major impact on the coatings industry as well. Prior to the development of this technology, there were very limited choices in both the aesthetic and industrial industries. Before the advent of this LuminOre® composite metal the only options were paint or solid metal. Aesthetic market coatings never achieved the perceived value desired and solid metal was too expensive and heavy. Industrial coatings lost much of its protection capabilities because of necessary reformulation requirements due to environmental regulations.

The composite metal industry was created through the development of an innovative, patented composite metalizing process, LuminOre is cold sprayable using conventional HVLP spray equipment and allows a layer of metal to be applied over almost any substrate, in virtually any configuration or design. From foam to fiberglass or plaster to paper, LuminOre composite metals adhere to most any surface and, once cured, LuminOre possesses many of the characteristics of a cast metal, including texture, luster and heat conductivity. The incredible results look, feel and act just like hot-cast metal, but without the weight and expense of a foundry casting. LuminOre composite metal is available in aluminum, brass, bronze, copper, iron, nickel-silver, white bronze, Xmetal, z3 and other metals. In addition, LuminOre composite metals can be cold-alloyed together to create your own custom metals. When you cold alloy aluminum and copper you create a rosé wine colored alloy. When you cold alloy bronze and copper you create a rich warm red bronze. The cold alloy formulations are endless.

Real Metal– Cold Applied



Tumasek Pewter—Malaysia



Orient Creative Solutions—Dubai, UAE

How It Works

a micelle phenomenon

How can a metal be sprayed? There is a chemical reaction between the metal and the binder. This reaction is a micelle phenomenon. This is not a suspension system of metal particles floating in a polymer paint system. The molecules of the binder wrap around each particle of metal. When you atomize the LuminOre liquid metal, you are not atomizing the polymer carrying the metal particle; instead you are atomizing the metal particle carrying just enough polymer binder to act as an adhesive. That is why when properly applied you can maintain plus or minus .001" The LuminOre cold sprayable metal is applied using 3M/AccuSpray 36 pro pack G HVLP (high volume, low-pressure) spray equipment - common tools that are readily available -- and is finished with standard metal polishing tools. It can be brushed or rolled on to a surface or cast solid. It can be coated on flexible surfaces and does not shrink. Once you spray or cast the LuminOre composite metal, you treat it like solid metal. You may sand, sandblast, polish, wire brush, acid wash, and machine it and seal it, even give it a hot patina wash. This LuminOre composite metal is Cost-Effective and provides the look, feel and durability of solid cast metal without the expense, weight, inconvenience and time of a forged metal product. It is most economical at 8 to 10 mils thick (1 mils = .001"). While comprised of up to 75 percent metal, the composite metal lacks the weight of solid metal. At its standard 10-mil thickness, this patented material adds less than four ounces per square foot to an object. As a result of using this composite metal technology, manufacturers have found that they are able to increase their revenues significantly and without a large investment.

Benefits and Ease of Use...

LuminOre Composite Metalizing System offers many advantages as an option to solid foundry casting, forging, and sheet metal:

- LuminOre cold sprayable metal offers a huge reduction in weight even over sheet metal
- Cold sprayable metal does not corrode, it will only patina
- Solid metal applied to many substrates leave air gabs for condensation to form and will result in corrosion or rot
- LuminOre cold sprayable metal process does not leave air gaps, it bonds directly to the substrate and follows all detail exactly

- Easy to Use
- Reduce Weight
- Single-Spray Application

Ease of Application

The cold sprayable metalizing process is a single spray application. You achieve a full .010" mil thickness with one single spray application. Traditional paint coatings require multiple layers of paint.

Traditional paints usually require drying times and possible sanding in between each coat of paint. This extra handling and spray applications leave the project open to the possibility of damage.

Storyland Studios—Lake Elsinore, California

Easier than Solid Metal to Repair

LuminOre Cold sprayable metal does not require a heat source to apply or make repairs as needed by solid metal applications. The patented cold spray-able metal may be touched up with a brush or spot sprayed to make repairs.

- Easy to Use
- Reduce Weight
- Single-Spray Application

Magic Metal—Sacramento, California

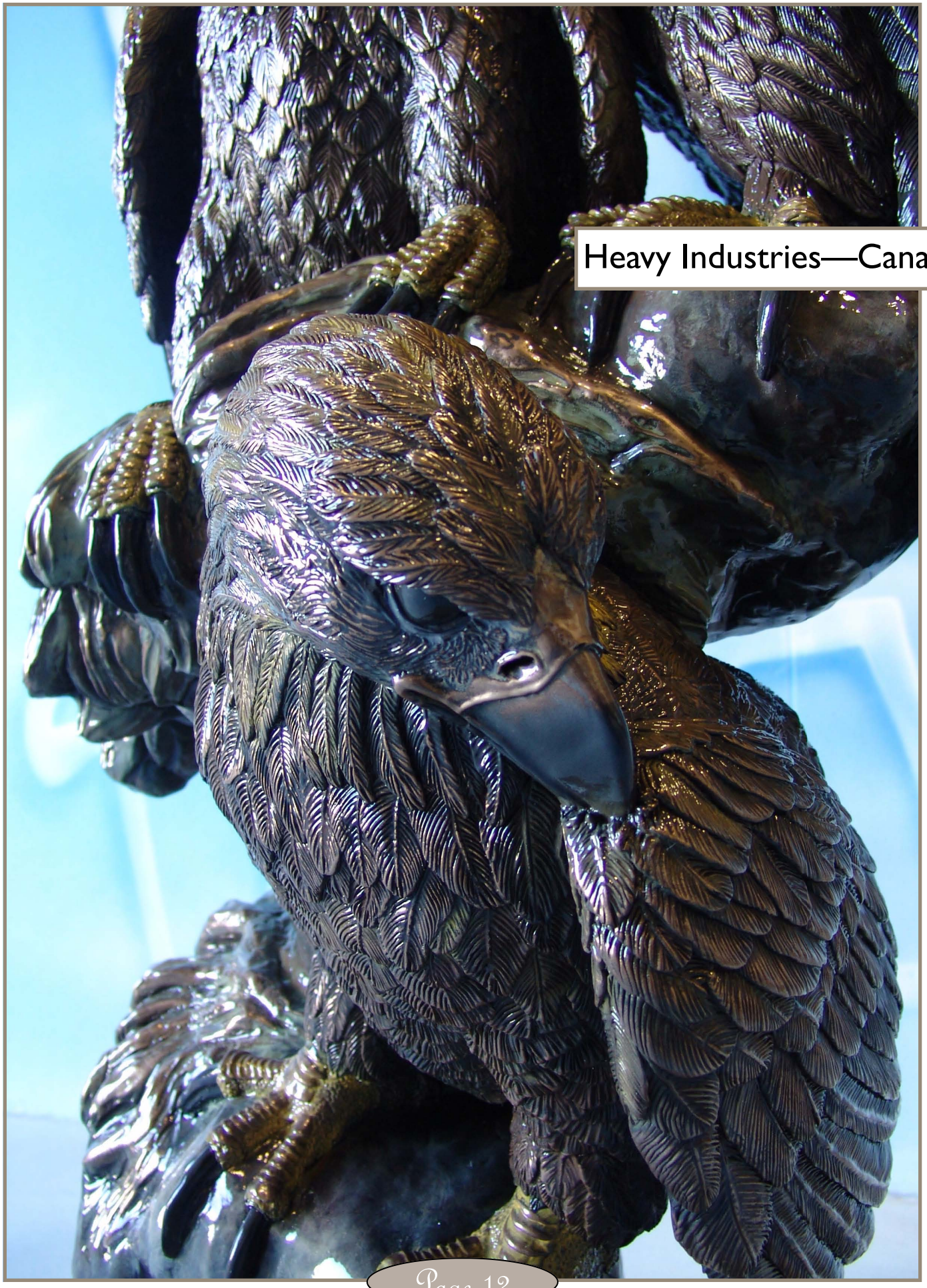
Cost Savings

The LuminOre patented Cold sprayable metal reflects only pennies on the dollar when compared to solid metals especially when there is a detailed surface involved. The following cost savings reflect savings on material, labor, and installation:

- ¼" sheet bronze can cost as much as $150.00 per square foot
- The patented Cold sprayable bronze can cost as little as $3.00 per square foot
- Fabricating out of solid cast, forged or sheet metal requires a very high level of expertise at a very high pay scale
- Entry level employees may be trained to use the Cold sprayable metals at a more reasonable pay scale

Available Metals

- Aluminum
- Brass
- Bronze
- Copper
- Iron
- Nickel-Silver
- Xmetal
- White Bronze
- Z3



Heavy Industries—Canada

Frequently Asked Questions

1. Is it paint?
No, it is not metal paint. It is a patented, cold sprayable metallizing process, comprised of up to 75% pure metal. LuminOre is an alternative to chrome plating, foundry metal, metallic paint finishes, plating, vacuum metallizing, and other metallizing processes.

2. Is it metal plating?
No, metal plating is an electro-chemical process. LuminOre, is a cold spray metallization process that can be applied to a variety of surfaces. These include but are not limited to: Laminate, melamine, wood, plastic, gypsum, fiberglass, ceramics, concrete, foam, porcelain, glass, and metal.

3. Is it powder coating?
No, powder coating is baked on. LuminOre is sprayed on, rolled on, hand-applied, or poured on. It also may be cast.

4. Can it be used on outdoor products?
Yes, over the proper substrate and when properly applied. We have documented ASTM testing with zero breakdown equivalent to 30 years.

5. Does LuminOre require special equipment?
No, most manufacturers have the necessary equipment, such as a spray booth and polishing items. LuminOre can assist you in selecting the proper equipment.

6. Is there a mil thickness limitation?
A minimum thickness of 0.008” to 0.010” can be achieved in a single spray application, and is found to be the most desirable. There is no limitation on how thick you apply LuminOre; however, the .008”-.010” is the most economical

7. How many coats are needed?
One spray application will achieve the desired mil thickness of .008” -. 010”.

8. What substrate can it NOT be sprayed on?
The only substances known are silicone, unsealed Styrofoam, Teflon® and some epoxies.

9. What is the coverage of each LuminOre kit?
Each kit covers up to 200 square feet, depending on the skill of the spray operator and the shape of the piece.

10. Is there any special training?
Yes, like successful solid-surface manufacturers such as Corian®, we offer training with LuminOre. Two-day, hands-on courses are held in Carlsbad, Calif.

11. Does LuminOre shrink?
No, because LuminOre is not metal paint, it does not shrink due to evaporation.

12. Is there really no heat involved?
That's right. There is no heat distortion and no heat impact on the substrate. LuminOre is a cold process.

13. Is LuminOre flexible?
Yes, LuminOre can be applied to flexible surfaces.

14. Does LuminOre conduct electricity?
No, LuminOre does not conduct electricity, and it is non-galvanic.

15. Does LuminOre have test data available?

Yes, LuminOre has conducted a series of testing ranging from fire rating to salt-fog chamber testing. For copies of LuminOre test data, please contact a LuminOre Representative at

(760) 431-7705.