

Chapter 1 : PDF The Neon Superguide Free Download | Download PDF Journalist Esdebout

Neon Techniques more towards on the scientific and mechanical side of information, and is not very "hands on" as The Neon Superguide by Randall L Caba. This book was clearly mass manufactured in China (even says so on the inside).

As a reference book for troubleshooting problems, The Neon Engineers Notebook also offers tips for improving neon skills. To me, every technical book, especially a reference handbook, must feature a detailed index. Next, my search for "mercury dispensing" led me directly to a spread, which depicted some information. However, surprisingly, none of the recent, mercury-dispensing methods, using mercury-containing electrodes offered by several manufacturers, was mentioned. First, Crook and Fishman stress the importance of a vacuum system properly equipped with meters and gauges to monitor critical bombarding parameters. Then not from afar, as Crook has co-produced the ISA pumping-instruction video , this book, for the first time, tries to explain how a proper neon-tube process is undertaken and which parameters must be within certain ranges. Further, an entire chapter, dedicated to possible solutions for the dimming-red problem see ST , March , page 72 , suggests helium bombardment to heat the tubes to a proper temperature. I suggest a pressure of approximately 15mbar to achieve enough heat in the glass. Another chapter discusses tube aging -- Crook conducted numerous experiments to determine whether there might be a certain "de-aging" process, or, what might be a sufficient aging time. According to his findings, 10 minutes on the aging table should be sufficient for red-neon tubes. More good stuff Neon glasswork creates the shape and beauty of a neon sign and, therefore, is the main task in addition to tube processing of neon signmakers. Here, Fishman and Crook provide several tips and answers to frequently asked questions, such as the correct burner type "A" or "N" to use for a specific gas. The authors also cover all basic operations of manipulating liquid-glass tubing, providing numerous recipe-like descriptions. In addition, the book features several chapters on non-standard-sign neon glasswork. Glass properties, tools, fires and required techniques are among the topics covered. Also in these chapters, the authors encourage readers to look beyond standard neon-signmaking practices and explore new territories. In addition to providing recipe-like details, the writers mention other helpful books, videos and material sources. However, keep in mind that many of the Website addresses the authors provide can quickly become outdated. Finally, the last chapter contains helpful information about the business aspect of operating a neon shop. Overall, The Neon Engineers Notebook is a treasure for anyone interested in learning more about neon-signmaking techniques. It makes you hungry for more neon and art varieties. Commencing her glassblowing career in , Sally has worked in reputable university glass studios and received numerous awards many of them from Corning Glass. According to Sally, "Glass is a limitless media for expression, showing flexibility, sound, sharpness, size and movement. In the book, they provide many tips and tweaks learned via their own neon-shop experiences. Plus, because many factors are involved, Fishman discusses business aspects and offers tips on how to avoid pitfalls and simplify operation of a small neon business. Sally commented, "Sometimes, I like to expand the glass into other shapes to get away from [tubular] lines and allow the light to diffuse -- the object inside interacts with the light itself. The goal of this book is to teach readers how to establish and maintain their own quality standard within the industry. To succeed in the neon business, your work must fall between these two points. The exact position is up to you. Here, Sally expresses her vision of people penetrating jumping into different spheres of imagination. This project combines scientific glassblowing and neon art. The light is created by the discharge inside two counterwound spirals like from chemical condensers placed inside the vacuum vessel.

Chapter 2 : The Neon Notebook

The "Neon Superguide Complete How-To Manual" is the successor to the Neon Principles reference and Neon Principles Workbook. This page handbook combines the previous guides with upgraded-updated illustrations and text, more helpful photos and three new chapters - more than one hundred fifty pictures, tables and illustrations in all.

The word neon comes from the Greek "neos," meaning "the new gas. Travers in in London. Neon is a rare gaseous element present in the atmosphere to the extent of 1 part in 65, of air. It is obtained by liquefaction of air and separated from the other gases by fractional distillation. The French engineer, chemist, and inventor Georges Claude b. May 23, , was the first person to apply an electrical discharge to a sealed tube of neon gas circa to create a lamp. Georges Claude displayed the first neon lamp to the public on December 11, , in Paris. Georges Claude patented the neon lighting tube on Jan. Neon lighting quickly became a popular fixture in outdoor advertising. Visible even in daylight, people would stop and stare at the first neon signs dubbed "liquid fire. To shape the tubes, the glass is heated by lit gas and forced air. Several compositions of glass are used depending on the country and supplier. We at Hope Neon Ltd. The tubes are scored partial cut with a file and then snapped apart. Then we create the angle and curve combinations. When the tubing is finished, the tube must be processed. The procedure is called "bombarding". The tube is partial evacuated of air. Next, it is short circuited with high voltage current until the tube reaches a temperature of F. Then the tube is evacuated again until it reaches a vacuum of 1 micron. Argon or neon is back filled to a specific pressure depending on the diameter of the tube and sealed off. In the case of an argon-filled tube, additional steps are taken for the injection of mercury. There are now more than colors possible; almost every color other than red is produced using argon, mercury and phosphor. Neon tubes actually refer to all positive-column discharge lamps. The colors in order of discovery were blue Mercury , white Co2 , gold Helium , red Neon , and then different colors from phosphor-coated tubes. The mercury spectrum is rich in ultraviolet light which in turn excites a phosphor coating on the inside of the tube to glow. Phosphors are available in most any pastel colors. Manufacturing process Lead glass tubing in external diameters ranging from about 8 to 15 mm is most commonly used in producing neon tubes for neon signs. The tube is heated in sections using several types of burners that are selected according to the amount of glass to be heated for each bend. These burners include ribbon, cannon, or cross fires, as well as a variety of torches that run on a simple combination of natural gas butane or propane work better, however natural gas is cheapest and air. A section of the glass is heated until it is malleable; then it is bent into shape and aligned to a pattern containing the graphics or lettering that the final product will ultimately conform to your custom neon sign. An electrode is melted or welded to each end of the tube as it is finished. The electrodes are also lead glass and contain a small metal shell with two wires protruding through the glass to which the sign wiring will later be attached. All welds and seals must be perfectly leak-proof before proceeding further. These electrodes are painted with a special black glass paint that virtually goes unseen and hidden in your custom neon sign. The tube is attached to a manifold which is itself attached to a high-quality vacuum pump. The tube is then evacuated of air until it reaches near-vacuum. During evacuation, a high current is forced through the tube via the wires protruding from each electrode in a process known as "bombarding". The current depends on the specific electrodes used and the diameter of the tube, but is typically in the mA to mA range, at an applied voltage usually between 15, to 25,V. The bombarding transformer acts as an adjustable constant current source, and the voltage produced depends on the length and pressure of the tube. Typically our operator will maintain pressure in the tubes as the bombarder bombard electrons hence heating the tube. This very high power dissipation in the tube heats the glass to a temperature of several hundred degrees Celsius, and any dirt and impurities within are drawn off in the gasified form by the vacuum pump. The current also heats the electrode metal to over degrees Celsius, which activates a special coating that scavenges unwanted contaminants in the tube and reduces the work function of the electrode for cathodic emission. When completed properly, this process results in a very clean interior at a high vacuum which is important to producing your long lasting, high quality neon sign. While still attached to the manifold, the tube is allowed to cool while pumping down to the lowest pressure the system can achieve. It

is then filled to a pressure of a few torr with one of the noble gases, or a mixture of them, and sometimes a small amount of mercury. Neon or argon are the most common gases used; krypton, xenon, and helium are used by artists for special purposes but are not used alone in normal signs. A premixed combination of argon and neon is often used in lieu of pure argon when a tube is to be installed in a cold weather climate. Neon glows bright red or reddish orange when lit. Argon by itself is very dim pale lavender when lit, but the droplet of mercury fills the tube with mercury vapor when sealed, which then emits ultraviolet light upon electrification. The finished glass pieces are illuminated by either a transformer or a switching power supply running at voltages ranging between 3, and 15, volts and currents between 20 and 60 mA. These custom neon sign power supplies operate as constant-current sources a high voltage supply with a very high internal impedance, since the tube has a negative characteristic electrical impedance. The most common current rating is 30mA for general use, with 60mA used for high-brightness applications like channel letters or architectural lighting. Custom neon signs are a type of cold cathode lighting. Your custom neon sign will have a 30ma transformer. Making Your Custom Neon Sign Once you have given us either a picture, faxed sketch, or just an idea over the phone, we design a layout, then get it to you for your approval of you custom neon sign. Once you have approved the layout, we glass bend your neon tubes by hand, and build a black acrylic box to suit your neon sign, then we mount the neon to the box. Your neon sign can be hung. Applications The light-emitting tubes form colored lines with which a text can be written or a picture drawn, including various decorations. By programming sequences of switching parts on and off, there are many possibilities for dynamic light patterns that form animated images in your custom neon sign.

Chapter 3 : The Neon Superguide: Complete How-To Manual |

The Neon Superguide Complete How-To Manual is the successor to the Neon Principles reference and Neon Principles Workbook. This page handbook combines the previous guides with upgraded-updated illustrations and text, more helpful photos and three new chapters - more than one hundred fifty pictures, tables and illustrations in all.

Utilizing a cross-disciplinary approach that makes the information relevant to architects, interior designers, landscape architects, graphic designers, and industrial designers alike, the book arms you with the skills needed to apply a standard, proven design process to large and small projects in an efficient and systematic manner. Learn industry secrets for selecting and working with a reputable design team, creating a logo design that stands out, promoting your brand promise, and building a small business brand that outshines competitors. Vinyl Sign Techniques Paperback by Jim Hingst Here is a brand new, comprehensive guide to every facet of the vinyl sign and graphics business. Compiled from 54 Vinyl Graphics columns in Signs of the Times, edited, updated and condensed here into 39 chapters, Vinyl Sign Techniques is an essential resource. The book is divided into four sections: Every important aspect to running an efficient and profitable vinyl sign business is covered in detail, often including valuable charts, tables and photos for reference. Jim Hingst, a respected and experienced veteran of the printing and vinyl industries, offers the lessons that were 25 years in the learning. Your business will benefit greatly from the advice in this book. They capture the customer's attention, provide the first impression and communicate the type of business. Sign Gallery 7 offers a wide range of excellent signs for businesses and budgets of all types. The types of signs include electric signs and channel letters, neon signage and graphics, digital displays, painted and vinyl signs, carved, routed and gilded dimensional signs, digitally printed banners, large-scale wall murals, architectural sign systems, vehicle graphics, entry monuments and more. Sign Gallery 7 provides the photos and descriptions that will help anyone to design and fabricate more eye-catching and effective signs: Sign Painters Paperback by Faythe Levine, Sam Macon, Ed Ruscha There was a time-as recently as the s-when storefronts, murals, banners, barn signs, billboards, and even street signs were all hand-lettered with brush and paint. But, like many skilled trades, the sign industry has been overrun by the techno-fueled promise of quicker and cheaper. The resulting proliferation of computer-designed, die-cut vinyl lettering and inkjet printers has ushered a creeping sameness into our visual landscape. Fortunately, there is a growing trend to seek out traditional sign painters and a renaissance in the trade. In filmmakers Faythe Levine, coauthor of Handmade Nation, and Sam Macon began documenting these dedicated practitioners, their time-honored methods, and their appreciation for quality and craftsmanship. Sign Painters, the first anecdotal history of the craft, features stories and photographs of more than two dozen sign painters working in cities throughout the United States. Signage Systems and Information Graphics: A Professional Sourcebook Paperback by Andreas Uebele The book showcases great examples of signage design worldwide, with an emphasis on the most original approaches. It is an indispensable reference for communications designers and a must for architects, interior designers, and graphic artists.

Chapter 4 : Sale Items | Savage Neon Signs

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Chapter 8 : - The Neon Superguide Complete How-To Manual by Randall L. Caba

The glassblower's tools --Shop equipment --Cutting glass tubing --Glass properties, welding and tubulating --The basic bends --Bending block letters --Basic pattern making --Bending script letters --Large circles and border tubes --Double outline and channel letters --Electrodes and tube processing --Tube painting, mounting and wiring --Building a simple manifold --Questions and answers --Neon.

Chapter 9 : Randall L. Caba (Author of The Neon SuperGuide Complete How-To Manual)

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