BY MATT SCHEIDT

Peace of mind from an ETCP Certified crew

Suspending aircraft at the National World War II Museum in New Orleans so that people can walk under them safely requires great care. Having certified riggers do the job reduces the risk.

MY THEATRICAL ROOTS are in the streets. I didn't do drama in high school, and I couldn't describe settings and scenes from any show unless I've actually seen it. In the late '80s and early '90s, I was working in my parent's recording studio as an audio engineer and I was in a band; some of my band mates were members of Rochester, NY's IATSE Local 25. There was a big call at the convention center and the local needed a bunch of extras, so I took my first stagehand call. Almost everything I've learned about how to be a stagehand was picked up working with touring professionals and those local hands. By listening to instructions, asking questions, doing what I was told, and retaining that knowledge until I no longer *needed* to be told, I became a valuable and knowledgeable production employee.

After a couple of years of setting up and striking the trade shows, concerts, and Broadway productions that passed through town, I found myself working on a load-in for the Eastman Opera Theatre at the Eastman School of Music. I was hired to work full-time at the Opera's scene shop, and I loved it. During my ten years of building and installing scenery, there was great emphasis on safety. We had $20K a semester kids, famous divas, esteemed professors, a host of backstage types, and on occasion, even my own children running around our stages. Great effort was made to prevent any accidents resulting in injury or property damage. Flying scenery was designed with overkill rigging. Rental pieces that didn't meet our standards were not used, and most importantly, we employed competent labor through the Local 25. These were experienced employees that took the job seriously with safety and good standards in mind.

In the summer of 2009, I moved to Pensacola, Florida. I contacted Mainstage Theatrical Supply in search of a position as an installer. They informed me during my interview that they were in need of a rigging and curtain project manager, and, much to my surprise, they hired me to fill that void. Now I was working in the construction industry. I started on a Wednesday, drafted, and submitted my first-ever set of installation shop drawings by Friday, and I haven't really slowed down since. The learning curve was pretty steep: doing take-offs from architectural and structural drawings, incorporating manufacturer's

Modern hoists are often mounted where access is difficult. They need to be installed right the first time.

recommended installation procedures, learning the accounting software to issue and order parts and equipment, and most of all, reading and interpreting construction contractual specifications.

In the permanent installation world, I have to keep safety as the principal factor in my designs. Many architectural design teams are offloading liability through delegated design. This requires the rigging contractor to have all installation details reviewed and approved by a structural engineering firm. While sometimes costly, especially if that little tidbit was missed in the quotation phase, working with these structural engineers has really honed my designs and application of techniques throughout the field.

So, why do I think it's important to be ETCP certified?

From a business perspective, the advantages of ETCP certified employees are numerous, including lower liability insurance rates, safer installations, and the ability to bid on jobs that require ETCP techs. Many project specifications are requiring the rigging and dimming contractor to have ETCP certified employees. There is also the peace of mind that comes with knowing your crews are doing everything they can to keep themselves and others safe.

From a work ethic perspective, further pursuit of knowledge in your field and keeping up with the improvements and evolution of technology and standards is never a waste of time. Applying this knowledge and making good standards and practices second nature should be encouraged. By taking the time to study and practice to become certified, our installers show the industry that they take their job, and the community's safety, seriously. As a business, we provide study materials, work with and educate our installers, and cover the cost of certification exams which shows that we strive to have the most skilled employees working on our installs. The industry is certainly changing, and thankfully, safety is becoming a major focus. Almost all general contractors have safety inspectors on site for all construction projects. Their single job is to walk the site and to verify compliance with all safety protocols. In response to this, all of our riggers have been certified on manlift operation, and we've trained all employees on fall arrest. All of our installers are OSHA 10-hour certified with our leads being 30-hour certified.

Within the last couple of years, some manufacturers are mandating, and most encourage, dealer installers to be ETCP certified. It is required that our lead installers be certified. At the Pensacola office, I purchased multiple copies of the recommended publications; we studied together and discussed practice exam results. We researched missed questions on the practice exam and created an outline for study topics. We set a timetable for the test to keep on track and not allow the process to "fizzle out" due to busy schedules. My head riggers and I are now training our other installers in the correct procedures and practices so that soon they will be ready to study and become certified as well.

From an installation project management perspective on these new construction jobs, often the performance space is stuck in a convenient and economical location in the building. The walk-on grid is a thing of the past, and a fly house with loft steel on 10' centers is rare on all but a very few designs. Sprinkler pipes, HVAC, and roof drains are plopped right in the way with no consideration of the true final function of the facility. The structures we are being required to rig from are not ideal. More and more, we are hanging pipe grids and curtain tracks from purlins, rigging hoists on bar joists and roof trusses, crossing spans, and creating points with Unistrut. Having installers in the field that can evaluate these

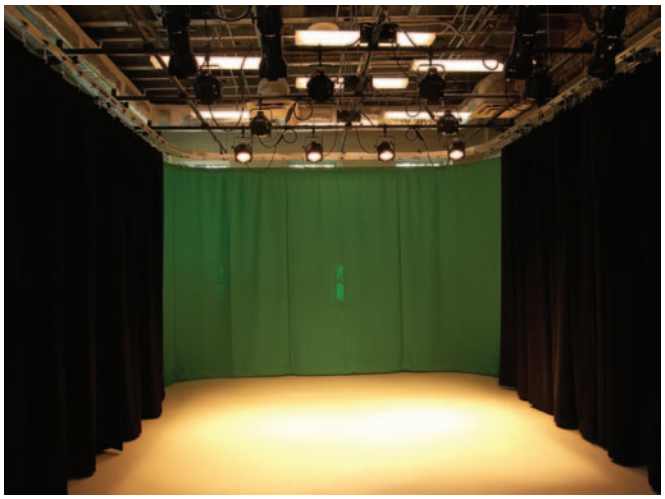
ICAP addresses safety at NFPA conference

The IATSE Crafts Advancement Program (ICAP) was invited to speak about backstage safety at the recent National Fire Protection Association (NFPA) conference in Chicago as part of our outreach to fire and electrical inspectors. Since safety is a major component of PLASA's American National Standards and a principle reason for hiring ETCP certified technicians, both PLASA and ETCP were featured in our presentation. IATSE Members who participated in this panel included Eddie Kramer, Local 1; Don LaPointe, Local 2; Eddie Raymond, Local 16; and Alan Rowe, Local 728.

Immediately following the NFPA Conference, Alan Rowe joined Kent Jorgensen, Local 80, at the ICAP's presentations on rigging and electrical safety at the InfoComm convention in Orlando, FL. Kent and Alan both spoke about the importance of hiring ETCP certified technicians and using PLASA Standards.

Eddie Raymond presents PLASA's TSP and the ETCP Program as an outreach to fire and electrical inspectors at the NFPA Conference.

Eddie Raymond, Local 16; Don LaPointe, Local 2; Eddie Kramer, Local 1; and Alan Rowe, IATSE Crafts Advancement Program, at the NFPA Conference.



Fixed pipe grids are simple, but safety is no less a concern with them than with powered rigging systems.

situations on site visits and installs is crucial to project preparation and safe installations.

Knowledge and application of the principles, practices, risk management, and hazard analysis embraced by ETCP make our little world a safer place. ■

Matt Scheidt is a Rigging Project Manager with MainStage Theatrical Supply, Inc. in Pensacola, FL. He is a father to three boys, Martin, Steven, and Joe. He is a Certified Rigger – Theatre and a manufacturer certified installer for ETC Prodigy, J.R. Clancy PowerLift, and Daktronics Vortek.

Using the standards— A guide for riggers and electricians

BY JAY O. GLERUM

In 1980, at a session on rigging at the USITT conference in Kansas City, a member of the audience asked, "Where can I find the standards that cover rigging in our industry?"

The answer was "nowhere." There were no standards because no one had written any. That question, however, prompted a long series of actions by USITT and ESTA (now PLASA) that resulted in the first rigging standard being approved by the American National Standards Institute (ANSI) in 1999. There are now more than 40 standards covering a multitude of subjects in the entertainment industry. Due to the generosity of ProSight Specialty Insurance, copies of the standards are now available at no charge and can be downloaded from the PLASA Web site, http://tsp.plasa.org/tsp/documents/published_docs.php.

> **"Purchasers and renters of these products should specify on the purchase order that the products they are ordering must comply with the appropriate standards."**

Now that we have the standards, **we need to use them**. A number of the standards specify how products are designed, manufactured, and tested. Purchasers and renters of these products should specify on the purchase order that the products they are ordering must comply with the appropriate standards. List the *specific* standard numbers and names on the order.

This document is intended as a guide for riggers, flymen, and electricians. Reading all of the relevant standards can be a daunting task. However, there are specific sections that relate to technicians and stagehands that need to be aware of the "user" requirements and responsibilities contained in the standards. Reading and being familiar with the entire standard will help the user have a better understanding of the scope of various User Sections. As a starting place, refer to the table below.

The table is intended as a quick guide to help users find the sections relating specifically to their work.

The first column, STANDARD, indicates the specific standard's number and name. Some of the titles have been shortened due to space limitations.

The second column, SECTIONS FOR USERS, lists the specific sections in the standard that are intended for the users of the equipment.
A checkmark in the third column, SPECIFY, reminds users that—when purchasing a product covered by the standard—the product being ordered must comply with the standard. Both the number and title of the standard should be referenced on the purchase order.

Jay O. Glerum is the author of *Stage Rigging Handbook* (now in its third edition), the only book on the design, care, and use of stage rigging. Jay regularly teaches classes on stage rigging throughout the US, Canada, and Europe.

RIGGING STANDARDS

STANDARD	SECTIONS FOR USERS	SPECIFY
E1.1 – 2012 Construction and Use of Wire Rope Ladders	Section 7, Ladder Installation Section 8, Ladder Use	X
E1.2 – 2012 Design, Manufacturer, and Use of Aluminum Trusses and Towers	Section 5, Use and Care Section 6, User Inspection	X
E1.4 – 2009 Manual Counterweight Rigging Systems	Section 6, Design Factors	X
E1.6-1 – 2012 Powered Hoist Systems	A general understanding of the entire standard. Section 11, Inspection and Testing Section 12, Maintenance	X
E1.6-3 – 2012 Selection and Use of Chain Hoists in the Entertainment Industry	Because stage hands select and install chain hoists, they should be familiar with the entire standard.	X
BSR E1.6 – 4 Portable control for Fixed Speed Electric Chain Hoists in the Entertainment Industry	This standard is in the process of being written. Copies of various drafts are available for public review. When completed, the entire standard is relevant to the user.	
E1.8 – 2012 Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture and Structural Testing	Section 9, Instructions for the Installer and User	X
E1.21 – 2006 Temporary Ground-Supported Overhead Structures Used To Cover Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events	This entire standard should be read by anyone involved with outdoor stages. Particular attentions should be paid to the Sections 4.7, 5, and 6.	XX
E1.22 – 2009 Fire Curtain Safety Systems	Sections 11 and 12. There are some variances with this standard and NFPA 80, and Life Safety Code 101. Authority Having Jurisdiction, (AHJ)	Determine which code is in force by the AHJ.

ELECTRICAL STANDARDS

STANDARD	SECTIONS FOR USERS	SPECIFY
E1.15 – 2006(R2011) Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies	Entire standard.	X
E1.27-2 – 2009 Permanently installed DMX Cables	Entire standard.	X
E1.32 – 2012 Guide for the Inspection of Entertainment Incandescent Lamp Luminaries	Entire standard.	
E1.36 – 2007(R2012) See abbreviated title in Section for Users	Model Procedure for Permitting the Use of Stage Lighting instruments for Conventions and Trade Shows. If you are doing convention or trade show work, you need to be familiar with this standard.	
Recommended Practice for DMX 512.	This is a guide for electricians installing and using DMX protocol for lighting and effects control.	
Recommended Practice for Ethernet Cabling Systems	This is a guide to older Ethernet systems and should not be used for new systems.	

FOR ELECTRICIANS RESPONSIBLE FOR FOG AND SMOKE EFFECTS ON STAGE

E1.23 – 2010 Design and Execution of Theatrical Fog Effects	Entire Standard	
E1.29 – 2009 Product Safety Standard for Fog Generators	Entire Standard	X
Introduction to Modern Atmospheric Effects, 4th Edition	A comprehensive guide to all types of fog and smoke effects for the entertainment industry. Entire Document	

FOR CAMERA CRANE USERS

Camera Crane Operators Handbook	Good advice on the use of a variety different camera cranes.	