

A NEW LOOK AT ERECTION

AISC's new Erector Certification Program is proving beneficial to erectors, contractors and owners



FOR TOM SCHLAFLY AND THE AISC ERECTOR CERTIFICATION PROGRAM, going to the ends of the earth is not just a figure of speech. Recently, Schlafly, AISC's Director of Certification, Fabrication, Operations and Safety, journeyed 12,000 miles to audit an erector at the South Pole.

Antarctic Support Associates, a joint-venture company put together to support National Science Foundation research operations at the South Pole, wanted to become a certified erector both to enhance their qualifications for federal work and to help improve their operations. "The conditions are brutal for construction," Schlafly explained. "Steel is fabricated in the U.S. and sent by ship—once a year—to McMurdo Station on

the coast of Antarctica. Then it's airlifted via a C130 Hercules outfitted with skis for landing after the three-hour trip to the pole. The plane can carry about 10 tons of steel with a maximum length of 20'—about the equivalent of half a truck load."

As tough as transportation is, erection at the pole is just as difficult. Temperatures range from a high of 7 degrees F to a low of -112 degrees F and wind speeds can reach as high as 50 miles per hour at the pole and 200 mph at the coast. The buildings are constructed on stilts to allow snow to pass underneath rather than piling up on the sides of the structures. Construction projects range from maintenance sheds to residences and research labs to replace and add to the original compound—many of which

buildings date back to the 1950s.

Antarctic Support Associates joins 11 other companies who have passed the AISC Erector Certification audit. The certification program is designed to demonstrate that a company has the experience, commitment, equipment and procedures to erect steel-framed structures.

The program was developed in conjunction with the National Erectors Association (NEA) and the Steel Erectors Association of America (SEAA). It is similar to AISC's well-known and highly respected Quality Certification program for steel fabricators, which many engineers, contractors and state agencies use as a form of pre-qualification. Currently, nearly 500 fabricators are certified.

PROGRAM CONCEPT

"The Erector Certification Program offers a system-based evaluation using annual randomly selected site visits and a review of quality systems," explained Schlafly. "While auditors observe erectors working on a site, it is not an inspection. The auditor looks for evidence that the company has the ability to perform the work, rather than ensuring performance on a specific project."

There are two levels of certification, Certified Steel Erector and Certified Advanced Steel Erector. Both levels are designed to ensure that erectors meet the following measures:

- Erection stability plan;
- Formal safety plan;
- Program in-place to promote project planning;
- Formal program to monitor compliance with welding and bolting procedures; and
- Written substance abuse plan

and policy. In addition, the Advanced certification includes:

- Experience in retrofit and maintenance;
- Experience with complex projects such as working over water and railroad tracks;
- Experience with large-scale erection projects;
- Procedures for rivet removal; and
- Written procedure for jacking and use of falsework.

ERECTOR REACTION

For Danny's Construction Co. Inc. in Minneapolis, erector certification was important as a means of improving their operations and workflow, explained Fred Haas, a Vice President at Danny's. "Our company also viewed it as an alternative to ISO 9000 certification," he said. The AISC Erector Certification program is focused on the issues important to erectors, fabricators and designers, such as proper welding, bolting and erection safety procedures. ISO 9000 is more directed towards general management elements, such as document control and non-conformance plans.

Thad Beal, vice president of Olsen-Beal Associates in Lindon, UT, agrees that certification can help improve the work processes of a company. "The application process that we went through—and we think we're a progressive company—caused us to start some new programs," he explained. "We realized we were missing some programs and we upgraded some of our programs after the visit of the auditing team. All erectors think they're the best, but there's always room to improve."

Beal also believes that erection certification is a way to help upgrade the people, companies and reputation of erection industry. "We think our industry is behind the times and we need to upgrade so we don't have 'renegades' who are unqualified and inexperienced. We think the industry needs standards. We

think its high time that the erectors in the U.S. doing these high visibility projects adhere to a common standard. I'm referring to all of the things in the applications process: safety, performance, quality and ethical issues. If we all strive to hit the same standard, the playing field gets better and we see less of those pictures on the cover of ENR with a crane tipped over."

Speaking at the recent North American Steel Construction Conference in Toronto, Tom Esper, Vice President with National Riggers and Erectors Inc. in Plymouth, MI, said that preparation for the Erector Certification Program helped clarify responsibilities and assignments at his company. "The biggest benefit was to be recognized in the industry as one of the leading erectors in the country," Esper said. In addition, it helped us establish better operating procedures and instilled pride in our company with our people."

OWNER INFLUENCE

While the erector certification is still young, it already is starting to influence some owners and developers. The renovation of Severance Center of Music in Cleveland, OH originally included erector certification in its specification and the City of Chicago included a requirement for AISC Erector Certification on the new Midway Airport terminal expansion project.

"The steel construction industry in general has been delinquent in addressing the need for extending the development of quality systems to the field erection of structural steel," explained David Harwell, president of Central Texas Iron Works in Waco, TX and chairman of the AISC Committee on Certification, Fabricating Operations and Safety.

"The AISC Erector Certification Program offers a mechanism for confirming the existence of a quality system within an erecting company—

and it can be audited," Harwell explained. "The erection companies that participate can provide a level of confidence to their customers that their system for building quality into the project can be achieved. Furthermore, the need for engineered erection plans, safety concerns, experienced staffing and overall project management functions are addressed in the program. The program has two levels of certification and can be used to assist in determining the qualifications that a steel erection company should possess in order to successfully and safely construct a structural steel frame. We are excited about its development and certainly hope that it will be received and implemented as successfully as the AISC shop certification program."

Added Beal: "We're a DOT contractor and we've made it known to DOTs that we're certified. They're surprised, but when we remind them that they often require fabricators to be certified, they're less surprised. They've all embraced it and we look forward to seeing this in future DOT specifications. Even though it was expensive and time consuming, I think it was worthwhile and it helped us improve our business. We've informed both our customers and our competitors. And those competitors who are good quality erectors are interested in the program. The 'good guys' want to see improved quality across the board," he said.

"It's a good program and we're enthused by it," Beal concluded. "We hope the other erectors embrace it and make it a viable, ongoing program so we can use it to come up with a better product. We can get our job done more efficiently if there are accepted standards. We haven't had one in the past."

For more information on the AISC Erector Certification program, contact Diane Smith at 312/670-5435 or fax 312/670-5403.

AISC AND SSPC ANNOUNCE JOINT SHOP CERTIFICATION PROGRAM

AISC AND SSPC: THE SOCIETY FOR PROTECTIVE COATINGS HAVE ANNOUNCED THE INTRODUCTION OF TWO COORDINATED AND EQUIVALENT QUALITY PROGRAMS to certify structural steel fabrication shops that paint and paint shops that coat structural steel.

This announcement is the culmination of a two-year project to coordinate equivalent quality programs, incorporating the expertise of both AISC and SSPC while avoiding the necessity of two quality certification programs for one facility.

AISC will continue to offer its Sophisticated Paint Endorsement (SPE) quality program, which is part of its program to certify steel fabricating shops, at no extra cost to participants of its shop certification program. SSPC will continue to offer shop painting certification under its QP 3 program. Both programs have been available to the industry the past few years but have recently been revised to provide equivalent and superior evaluation of quality criteria.

Facility owners can have the confidence to specify either an SSPC-QP 3 certified paint shop or an AISC SPE certified fabrication shop, knowing that they will receive bids from shops with equivalent capability for contracts calling for shop painting of fabricated structural steel.

EQUIVALENT CERTIFICATIONS

Beginning later this year, both organizations will begin offering equivalent certifications for shop painting in three categories: (1) enclosed shop; (2) covered shop; and (3) open shop.

The enclosed shop category will be issued to shops which

demonstrate that they normally conduct coating operations in an enclosure or building (four walls to grade and a roof) which is not subject to outdoor weather conditions and blowing dust. The covered shop category will be issued to shops that normally conduct coating operations under cover; that is, out of direct exposure to outdoor weather. The open shop category will be issued to those shops that normally conduct coating operations in a field or yard exposed to outdoor weather conditions and blowing dust.

All shops, regardless of category and which organization evaluates them (AISC or SSPC), will be required to meet similar requirements for Management Functions, Technical Capabilities and Quality Control Procedures and Practices. Requirements will be verified during an audit conducted annually at the shop's facility by an independent auditing company.

A special task group, made up of fabricators, Department of Transportation engineers and industrial customers, began meeting in early 1997 to reconcile differences between the two organizations' certification programs. In order to ensure that the AISC and SSPC programs are equivalent, the Task Group looked at three key function areas of the audit: Management, Technical Capability, and Quality Control. The Task Group developed equivalent evaluation criteria for both the AISC and SSPC audits.

Safety, Health and Environmental Compliance, which is evaluated by the SSPC under its QP 3 program, but not by AISC under its quality program, is not addressed in the

equivalency evaluation. The task group agreed that these areas are important, but the two organizations deal with them in different fashions. SSPC's QP 3 program remains the only independent program available for evaluating a shop's capability to perform hazardous paint removal and disposal operations for those owners who contract to de-lead structural steel or other pieces (e.g., vessels or fleet equipment) in the shop.

After ensuring the auditing criteria were the same for both the AISC and SSPC programs, the task group then evaluated how each organization audited and rated the shops to ensure that auditing and scoring were done similarly.

CERTIFICATION HIGHLY RECOMMENDED

Both AISC and SSPC strongly recommend that facility owners require that any shops hired for painting or for fabrication of structural steel to be painted to provide in-service corrosion resistance be certified to the AISC SPE or the SSPC-QP 3 programs. This helps ensure that the owner's contracts are awarded to capable shops that have been evaluated independently to the highest standards. AISC and SSPC offer the following sample contract language for owners requiring certified shops:

All shop painting of structural steel shall be done by companies that are certified by the American Institute of Steel Construction (AISC) under its Sophisticated Paint Endorsement (SPE) quality program or by SSPC: The Society for Protective Coatings under its QP 3 quality program. Shops shall be certified to category (choose enclosed shop, covered shop, or open shop). The companies shall be fully certified for the duration of time they are performing surface preparation and coating application. Optional statement for those requiring enclosed or covered shop: The complete coating system shall be applied in

(designate type of shop) except for field touch up painting.

Both AISC and SSPC expect to have their equivalent certification programs completely phased in by the middle of next year (2000). For more info on the AISC program, contact: AISC Certification, One East Wacker Drive, Suite 3100, Chicago, IL, 60601-2001. Telephone: 312/670-2400. Email: qualcert@aisc-mail.com or visit the AISC web site at www.aisc.org.

For information on SSPC-QP 3, contact: SSPC Shop Certification Program, 40 24th Street, 6th Floor, Pittsburgh, PA, 15222. Telephone: 412/281-2331, ext. 238. Email: rowe@sspc.org or visit the SSPC Online at www.sspc.org.