

ANSI/ASSE A10.21-201X: Safe Construction and Demolition of Wind Generation/Turbine Facilities

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Introduction

The ANSI Accredited A10 Committee (ASC) is one of the longest existing voluntary national consensus standards committee in the United States. Founded originally in 1944, the A10 ASC writes and interprets voluntary national consensus standards relating to the protection of employees and the public from hazards arising out of, or associated with, construction and demolition operations.

SH&E professionals working in the construction industry have significant interest in these standards, due to the fact that they are recognized in both the public and private sectors. Specifically, the A10 Standards have extensive recognition in the standards of the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) and by a series of other national and state government agencies. At the private sector level, A10 Standards are widely cited and required in different contracts and work agreements

The full A10 ASC is made up of seventy-four national organizations from the private and public sector. In addition, there are forty-nine (49) accredited standards and projects under the A10 banner. A subgroup is created and approved by the committee, which is responsible for putting together draft documents for review by the A10 ASC. The subgroups are not responsible for the definitive content of the standard and instead serve to assist the committee in putting the documents together and serving as a technical resource.

ANSI Background

The history reprinted below from the Laborer's Union Newsletter, Life Lines, presents a short and concise history and background of ANSI, which is:

Founded in 1918 and based in Washington, DC and New York City, ANSI is a private, non-profit organization that administers and coordinates the

ongoing development of standards to guide all aspects of American production. In 2002, it had more than 10,000 standards, 40 of which address safety issues in the construction and demolition industry.

ANSI standards seek to standardize both the process and the output of American production. Further, through its participation in the International Organization for Standardization [ISO], ANSI is able to ensure that imported products meet American standards and, often, that standards developed in the United States are adopted as national standards by other countries. Its mission [www.ansi.org] is "to enhance both the global competitiveness of US business and the US quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and safeguarding their integrity."

Value of ANSI Standards

The purpose of these voluntary national consensus standards is to provide guidance and technical information to different industries. In the case of the A10 ASC, it is to provide guidance to the construction and demolition industry. The recently approved A10.32, *Standard for Fall Arrest/Protection on Construction and Demolition Sites*, is a good example of how such standards can be used. The A10.32 Standard is intended to fill gaps in the regulatory structure. Of additional importance is that it can take literally decades to write federal or state regulations. In many cases, voluntary national consensus standards are "ahead of the curve" when it comes to addressing good science and technology. On occasion, ANSI standards can also find their way into legislation.

However, it is at the private sector level that widespread recognition of the A10 Standards is prevalent. An example is the ANSI/ASSE A10.12, *Safety Requirements in Excavation*. The standard was recently reaffirmed and is commonly referenced and cited as a guidance document in contracts and work agreements. ANSI/ASSE A10.34, *Protection of the Public on or Adjacent to Construction Sites*, is also an excellent example of a standard that is widely used in the private sector. Several hundred copies of the standard have been ordered, and we are aware of the standard being referenced in at least two-dozen contracts.

It should be noted that perhaps the primary reason why ANSI standards are so broadly recognized and accepted is the process by which they are developed. It is required that the standards be written via a consensus process. "The fair and open ANSI process ensures that all interested and affected parties have an opportunity to participate in a standard's development. It also serves and protects the public interest since standards developers accredited by ANSI must meet the Institute's requirements for openness, balance, consensus and other due process safeguards." Of interest to SH&E professionals is that by ANSI procedures, accredited standards must be revised, reaffirmed or withdrawn every five years to ensure that they remain relevant and up-to-date. The

purpose is for the standards to move forward and the improvement process is incremental by design.

How Standards Are Used by National Governmental Agencies

There is the possibility that voluntary national consensus standards can be used in regulation at the federal, state, and local levels. The national level generally draws the most comments, due to the impact of OSHA on SH&E professionals. With the Morella Amendment to the Technology Transfer Act of 1995 (Section 12D of Public Law 104-113) and the Office Management and Budget Circular A-119, there is a greater attention being paid to voluntary national consensus standards, (e.g.: ANSI, ASTM, NFPA, ASME, etc.). These laws/guidelines do not require the use of a voluntary national consensus standard; however, they do require that an agency review them during proposed rulemaking. In such a situation, the standard(s) could be entered into the record with a request to the agency that it review and cite the draft standard(s). It should be noted that ASSE has extensive materials addressing these very issues on its website (Lazarra 2004; Demby 2006; ASSE 1996).

There is an also official memorandum of understanding between OSHA and ANSI (OSHA/ANSI 1991).

New Proposal—A10.21

A10.21 Background and Direction: During the January 2009 A10 ASC Meeting, the committee reviewed the proposal below:

New Standard Proposal – A10.21-201X: American National Standard for the Safe Construction and Demolition of Wind Generation/Turbine Facilities

Scope: This standard establishes the minimum requirements for protecting the safety and health of persons involved in construction and demolition operations addressing wind generation/turbine facilities.

The major construction tasks on a wind project would be:

- Wind turbine assembly and erection
- Civil construction (roads and pad clearing)
- Structural construction (foundations)
- Placement of electrical collection system (buried medium voltage lines)
- Substation and transmission line construction

Activities:

- WTG component offloading
- Site staging
- Base tower section placement (could include anchor bolt tensioning, leveling/grouting)

- Tower assembly
- Nacelle placement
- Rotor assembly (typically on the ground)
- Rotor placement
- Mechanical completion and commissioning

This would include safety issues regarding working at heights, mechanical assembly of large components, medium voltage electrical safety, and working in exposed environments. There would be a need to cite/recognize other existing voluntary national consensus standards.

This topic generated an extensive discussion. Eventually, a motion was approved that the A10.21 standards project would be launched. The key issue discussed by the committee addressed the suggestion that more than just employees could work on a structure, such as independent contractors, engineers or surveyors. Technically, these are not employees, but they could still be exposed to hazards when working with the construction crew. The committee decided that the scope statement must be edited to include all persons and not just the employees of a company.

In addition, Ryan Jacobson was approved to Chair the A10.21 subgroup, and Walter Jones from Laborers' International Union was approved to serve as liaison.

At the time of this writing, the A10.21 ASC has had several subgroup meetings, but an official draft has still not been released for ballot by the committee and public review by stakeholders.

The hope is that an official draft will be released prior to the ASSE 2010 Professional Development Conference (PDC), which can then be shared with attendees. If not, we should still have a pretty solid outline to share with conference attendees.

In addition, Underwriters Laboratories (UL) has also launched a series of standards-development activities impacting wind generation equipment. However, these standards will primarily impact the specific manufactured electrical components and not wind generation construction as viewed by the A10 ASC. The intent is to also use the A10.21 Subgroup as a technical review subgroup for the full committee when reviewing the UL proposed standards.

Timeline and Conclusion:

Our intent is to:

1. Hopefully finalize an official draft standard during May 2010.
2. Ballot the full A10 ASC during the summer of 2010.
3. Announce the standard for public review during the summer of 2010.
4. Start the comment resolution process during the fall of 2010.

We cannot offer any additional time estimates at this point, since the resolution process will be driven by the volume and complexity of the comments. The comments will be addressed per the A10 ASC Accredited Procedures and the ANSI Essential Requirements Document.

Resources

Demby, Glenn. 2006. "What's the Difference Between an OSHA Rule and an ANSI Standard?"

(<http://www.asse.org/publications/standards/docs/Dembystandardsarticle3-21-2006.doc>), retrieved March 25, 2010.

Lazarra, Joseph. 2004. "Are ANSI Standards Really Voluntary? EHS Today

(http://www.occupationalhazards.com/Issue/Article/37355/Safeguarding_Are_ANSI_Standards_Really_Voluntary.aspx), retrieved March 25, 2010.

American Society of Safety Engineers. "ASSE Position Statement on Role of Consensus Standards in Occupational Safety and Health"; Adopted October 1996; updated June 2005

(<http://www.asse.org/professionalaaffairs/govtaffairs/roleofconsensusstandards0406.php>), retrieved March 25, 2010.

Occupational Safety and Health Administration and American National Standards Institute. 2001. "Memorandum of Understanding Between the Occupational Safety and Health Administration and National Standards Institute."

(http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=MOU&p_id=323), retrieved March 25, 2010.