**PS: What are ISO 17025 laboratories and how are they accredited?**

**Paul:** ISO 17025 specifies requirements for the competence of testing and calibration laboratories. It includes management requirements (e.g., document and record control, customer service, internal audit and review, improvement actions) and technical requirements (e.g., personnel, test and calibration methods, equipment, traceability of measurements, specimen handling, reporting).

Laboratories are accredited to this standard—within a defined scope of competence—by an independent accreditation body. Most developed countries have a national accreditation body; the U.S. has eight. Such bodies are required to maintain compliance with ISO 17011, among other requirements (refer to www.ilac.org for more information).

Laboratories seeking accreditation against ISO 17025 must define their scope of testing and/or calibration and demonstrate their competence to the accreditation body. This takes the form of an initial document review, followed by an initial assessment visit and subsequent regular site visits by the accreditation body. During these visits, the lab must demonstrate all aspects of its activities and prove its competence.

**PS: Why was the standard, Qualification and Verification Testing of Fall Protection Products (ANSI/ASSE Z359.7-2011), developed, and how have manufacturers responded to it?**

**Paul:** I believe Z359.7 was developed because some committee members wanted more confidence in the legitimacy of the Z359 mark applied to fall protection equipment.

The ideal way to do this would have been to introduce a mandatory independent certification program. I believe this was considered, but, for various reasons, the Z359 ASC did not adopt it. The standard was produced to provide the next best solution.

Manufacturers are mainly working toward getting their own labs accredited or getting organized with an accredited third-party lab. I have not been made aware of any problems with arrangements for witnessed testing.

The Z359.7 standard sets forth requirements for third-party, witness and manufacturer testing of Z359 fall protection products. It also requires labs where testing of fall protection equipment is conducted to be accredited as an ISO 17025 lab.

**PS: How can labs and manufacturers best approach the ISO 17025 accreditation process?**

**Paul:** First, manufacturers should decide whether to use an accredited third-party labs, establish their own lab and seek accreditation to ISO 17025 or employ witnessed testing at their own labs. This decision will usually be based on the number and volume of products that need to be tested, initially (qualification testing) and subsequently (verification testing).

Labs seeking accreditation should:
- Buy a copy of ISO 17025 and review its requirements against the management system and technical facilities that exist in the lab.
- Address the shortcomings (employ expert advice if unsure).
- Decide the scope of accreditation. What tests need to be accredited?
- Review available accreditation bodies and obtain quotes for accreditation against your specified scope.
- Request a preassessment/practice assessment by the chosen accreditation body (to highlight shortcomings);
- When ready, apply for accreditation.

Do not underestimate the stringency of an assessment. If a performance criterion, method, equipment or measurement is not adequately defined within a product standard, the lab will be expected to have any omissions and ambiguities covered and documented. Pay particular attention to measurement traceability, measurement uncertainty and proficiency testing/interlaboratory comparisons.

**PS: Do ISO 17025 lab accreditation requirements change often?**

**Paul:** Like most national standards, ISO standards are reviewed at 5-year intervals. ISO 17025 was last amended at the end of 2006, and was reviewed and confirmed in December 2010. So, the standard should remain unchanged for another 3 years.

To maintain accreditation, labs need to consider whether changes to their practices and procedures are necessary, in the light of the next revision of the standard.

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ISO 17025, and, much more likely because of new and revised Z359 product standards.

**PS:** How does the ANSI/ASSE Z359.7 standard guide manufacturers on testing fall protection products?

**Paul:** Z359.7 specifies requirements covering the accreditation of the testing laboratory, the test equipment, the number of specimens to be tested and the duties of manufacturers. A product must comply with the standard before the Z359 mark is applied. However, it is a serious shortcoming that current Z359 product standards do not require that such testing be performed following the requirements specified within Z359.7. These requirements are contained only within Z359.7 itself.

In the absence of such requirements within the product standards, there is a real danger that only manufacturers that have member representation on the Z359 technical committees and in International Safety Equipment Association will be aware of the existence of Z359.7 and its specification for qualification and verification testing.

Responsible independent test labs will guide manufacturers that do not fall within that scope toward Z359.7, especially overseas manufacturers. However, such manufacturers may have their own labs and, therefore, may not contact an independent accredited lab. They could perform their own testing against the product standard—in complete ignorance of Z359.7—and thus innocently make a fraudulent claim of compliance for their product.

In summary, and until this situation is addressed, the Z359 mark on a fall protection product is no guarantee that it has been tested in accordance with Z359.7.

**PS:** How can SH&E professionals ensure that fall protection equipment satisfies the respective Z359 product standard and has been tested by an ISO 17025 accredited lab?

**Paul:** The Z359 standards are voluntary consensus standards. Legal requirements for protection against falls from heights are established by applicable regulatory bodies governing occupational safety.

However, each Z359 standard specifies that all applicable requirements of the standard shall be met before the product bears the Z359 mark. So, ignoring false claims and counterfeits, an SH&E professional should look for the applicable Z359 marking on the product.

But, the product standards themselves do not require, within the marking/labeling on the product or within the accompanying user information, any indication that qualification and/or verification testing was performed by an ISO-17025-accredited laboratory. And Z359.7 does not require a manufacturer’s declaration of conformity.

However, Z359.7 requires that test reports exist for all such testing and that, on request, such reports shall be provided with applicable product information. Therefore, SH&E professionals could request such reports.

**PS:** What actions do you think the Z359 committee should take now?

**Paul:** All existing Z359 product standards should be provided with a small amendment that states the need to follow Z359.7 during testing for qualification and verification purposes. All new Z359 product standards, and those currently reviewed, should include similar text.

**PS:** How does the ANSI/ASSE Z359.7 standard influence fall protection equipment testing in the long term? Will testing labs need to meet additional requirements in the future?

**Paul:** Drafting of all of the standards within the Z359 series is nearing completion. Some new tests may be included in the remaining standards and labs will need to add those to their accredited scope. Currently, most Z359 product standards still include testing requirements. Once all of the standards are drafted, I hope that at the first review of Z359.7 the opportunity will be taken to harmonize and consolidate all of the testing requirements within that standard.

By eliminating small and sometimes unintended differences in test methods that currently exist (in some of the product standards), fall protection equipment testing will become better defined and controlled and, thus, more readily and efficiently implemented by labs. This, combined with the steps suggested previously, will help to instill more confidence in the integrity of fall protection products identified as complying with Z359 standards.