

**ANSI A10.32 Fall Protection Systems for Construction and Demolition  
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Thanks Tim and hello everyone.

I do not want to read the standard verbatim. Pity the conference participant who's subject to that kind of presentation. Instead, I'll be directing your attention to certain specific definitions, requirements and key points in the sections as we proceed. Tim and I will be highlighting those things considered topical to keep things interesting. Some subsections comprise plainly understandable language and specifications but some are controversial. Understand that I'm not interpreting A10.32 when I do speak on those controversial sections but rather, just as Phil Colleran, a person with some practical understanding of the standards-making process and fall protection as a continually evolving science.

Of course we have questions to address. As we run through the sections you may have them answered in the context of the presentation. As Tim pointed out, we'll be answering all questions received today as well, but unfortunately not in the session. Regardless of when you ask a question, we're going to answer it. Please feel free to contact ASSE at any time. The Secretary will forward your inquiry to the A10.32 subgroup.

## **Slides 5-8**

Turn if you would to Slide's 5-8 and let me explain a few things about both A10's standards generally, and A10.14 specifically.

I've been an elected representative of the A10 parent committee for more than 12 years. The committee has been around and producing standards for decades. In fact many of the original standards promulgated by OSHA back when the agency was getting underway were ANSI standards, many of them coming under the old moniker – ASA standards. A number of them were either lifted verbatim into OSHA's rules and regulations or were incorporated by reference. In construction we're still using a number of older ANSI standards – B30.5 covering cranes for example. That's a 1968 standard. B30.5 has been revised many times since. You can see that ANSI standards, just by they're being revised as often as they are, reflect the current thinking of the industry. OSHA recognizes this and occasionally references of our standards. Take two of the forty standards our parent committee oversees that deal with construction safety management – A10.33 and A10.38 – they're referenced by OSHA in their interpretive guidance on effective safety program elements and its multi-employer citation doctrine.

## Slide 6

Will A10.32 become the law?

Most S and H professionals would like to see best practices as represented by voluntary consensus standards as opposed to compliance with minimum regulatory requirements such as OSHA. The question is always asked: how will these standards impact the existing regulations or statutes.

- From a liability perspective, consensus standards are often, if not always, viewed as authoritative sources. That's why the scope, purpose and application are very important. That's also why you're beginning to see more two column formats that have the standard on one side and interpretations and/or guidance on the other.
- From a regulatory perspective, consensus standards can often be introduced as a basis for sustaining general duties such as section 5(a)(1) of the OSH Act.
- Let me explore one additional arena where I observe ANSI Standards to be very much in play. They are now being incorporated by reference into construction contracts as project specifications. Just as general contractors and construction managers have seen fit to incorporate their own safety programs (which often exceed OSHA), they are now going one step further by incorporating certain ANSI standards. To my way of thinking, this is an excellent way of advancing state of the art safety methods and bringing excellence to construction.

## Slides 7-12

First of all A10.14 is no-longer in effect. Its withdrawal didn't impact users of the equipment. They were either moving ahead with more progressive methods of providing fall protection and availing themselves of all the recent developments in fall protection technology or they were minimally complying, which, regardless of OSHA, begs the question – is a lot of fall protection equipment being irresponsibly handed out without proper user training? The entities that are perhaps more impacted are the manufacturers a few of whom will be playing catch-up, if the questions we've received are any indication, Certainly the major producers of fall protection equipment, many of whom served or were represented on both Z359 and A10.32 were aware of these changes long before publication of this standard.

A10.14 lived on during most of A10.32's development. Many who served on A10.14 also served on A10.32.

A10.14, though widely recognized at many levels of government, simply didn't address the incredible amount of new science on the subject of personal fall protection.

Some say a waist belt is still a valid form of fall protection if used in positioning and technically, I'd agree. OSHA's Subpart R refers to a waist belt in the context of restraint. I'd like to editorialize by saying that eventually we're going to be equipping all construction workers with multi-function body harnesses – by that, I mean one unit for a variety of purposes, designed and equipped for arrest, restraint, positioning rescue and retrieval. There will even come a day when self-retracting lanyard/lifelines will be an integral part of harnesses and replace the shoulder D-ring – it's all a matter of time and developing materials sufficiently light enough in weight to do it.

**No break**

**Slides 11 and 12** compare A10.14 and A10.32. They're informational and self-explanatory. Tim, with your permission, I'd like to go on to slide 13 to keep things moving.

## Slide 13

Many questions were sent in concerning the differences between Z359 and A10.32. One need only do a side by side comparison of the two standards to see that there are some big differences in purpose, application and scope. While Z359 addresses many of the components associated with personal fall protection, its scope is limited to those components used in the context of fall arrest. A10.32 is broader in its approach – if for no other reason than because of when it was originally written – we will always be making advancements in fall protection technology – but A10.32 uses in its scope the very important term we should all now be considering – **Personal Fall Protection**. This term works from the premise that there are measures we can take or at least should take in preventing a fall arresting episode in the first place.

Along that same line, I have carefully compared Z359 and A10.32 for one message that I think needs saying... when we take the age-old maxim of safety and marry it to fall protection – eliminate, control, warn – we’d obviously have to say that when work can be performed from the confines of a guarded platform, thus eliminating, to a large extent, a fall potential, it is always preferable to the use of personal fall protection. Personal fall protection, to my way of thinking, is really a type of control (i.e. a lesser type of hazard prevention). Here is where Z359 is unequivocal. In my opinion, we should all be straight up in saying this. On the other hand, there are many operations where we’ll always be using personal fall protection because it’s the most reasonable and practical method of performing the work...formwork for concrete and rod busting for example.

Z359 specifically excludes construction in Section 1.3.1. A10.32 fills the gap. Certainly, personal fall protection is used on a more “every-day” basis in construction than it is in general industry and for this reason alone, there was great need for such a standard. Z359, while it addresses components for fall arrest systems, doesn’t include the use of those components in the context of positioning or restraint. A10.32 addresses restraint and positioning because, again, these kinds of personal fall protection recognize that there is a hierarchy of controls for the use of such equipment – that wherever possible, we do not want to get into a fall arresting episode. But back to why we’re here...

## **Slides 14 and 15 (Back to why we're here.)**

This standard became effective in May of this year and represents ten years of effort. Watching it evolve from a perspective on the parent committee, I think it truly represents consensus and the current thinking. There is always give and take. Reading through the standard, I found only a couple ambiguities – which I'll pass on to you.

Fall protection is a science unto itself. It took OSHA ten years to get a fall protection standard on the street. And yet, even since 1994, when subpart M became a final rule, we've learned so much. We've just begun to broach rescue and retrieval but I applaud A10.32 for at least putting this vital issue on the table. Subpart M just touches on restraint and positioning, to say nothing of self-retracting lifelines. Again, A10.32 gets into a great deal of detail. In the next five years you'll see a lot of science in this area and we'll come to a greater degree of consensus and detail in this area.

## **Slide 16 (Scope)**

As with any standard the scope and application is critical – **USE SLIDE**

## **Slides 17 and 18 (Purpose and Application)**

The standard can be best broken out for two general entities:

- Those involved in the equipment's use (the largest entity)  
and
- Those involved in the production of the equipment.

For purposes of this conference, we'll be spending more time with those areas of the standard that impact the users for the simple reason that many, if not all of the manufacturers have or should have a level of expertise in understanding the reasoning behind these standards - greater than myself certainly – and probably greater than many safety and health professionals who will be putting this standard to work.

## **Slide 19 and 20 - Definitions**

Just a quick correction on the first point of the power point slide: in fact, as we've pointed out, both the standard and its definitions are significantly changed from earlier documents.

Also important to point out: The standards drive the definitions and not vice versa – from a compliance perspective some regulators will look at the definition first and then the standard. Liability experts will make this mistake as well. That is inconsistent with the thinking of the subgroup and the secretariat.

Perhaps Tim could also comment on that...

I think I've sufficiently discussed the differences in definitions found in A10.14 and our new standard – with that...lets talk about some of those definitions –

## **Section 2 Definitions**

### **USE the Marked-up Standard**

## **Section 3 - General Requirements**

### **Slides 21-23**

I would ask that the participants pay particular attention to the text of the standard as we run through Section 3 as these are the critical general requirements.

## **Section 4 - Performance Requirements**

### **Slides 24-26**

Many of these are manufacturer-oriented requirements and some are user-based. Again, let's keep the text of the standard in hand.

## **Section 5 - Marking**

Marking is again, very manufacturer oriented but users must be aware of a number of critical subsections. Again, let's have the standard in hand.

## **Section 6 – Employer requirements**

A very important section for users...again try to stick with the standard.

## **Section 7 – Test requirements**

We won't be elaborating on this section but I do want to direct the participants' attention to the kinds of strength and force testing protocols that must be observed by the manufacturers of personal fall protection systems and individual component of systems. We also want to direct your attention to the three appendices, figures 20, 22 and 23, again relating to strength and force tests. You can see that a considerable level of effort is made in attempting to bring quality to the user.

**Tim?**

## Questions – A1264

Tim will read the questions and then introduce the person answering the question. Phil will then answer.

1. A philosophical question – Can you go into more detail as to why the A10.14 Standard was withdrawn by the committee. It seems the committee lost a great deal of history with this new approach. Also, as a manufacturer of fall arrest equipment the A10.14 Standard was well known throughout the industry. My concern is that the A10 committee went out and made such a significant change without getting feedback from the manufacturing community. I now have to change much of my marking and I still have inventory in stock under the A10.14 standard. Can you comment on that?

As with many revised or dated standards, the A10.14 will always remain available through ANSI, but A10.14, for all its usefulness then, simply isn't useful now, either in terms of the available science or simply the nomenclature.

With respect to manufacturer input, the subgroup was comprised of some of the country's leading authorities on the subject of fall protection, a significant number of them manufacturers and distributors. Manufacturers were also represented by the Int'l. Safety Equipment Assn. which in turn kept its members apprised of the status of the standard. Clearly, the delay in getting this standard on the street was because of the number of fall protection appliance manufacturers who participated on the subgroup. We need only return to past parent committee meeting minutes that reflect the kinds of issues and loggerheads faced by the subgroup during the standard's development.

2. I disagree vehemently with both this committee and the ANSI Z359 Committee over their use of the term fall protection – in relation to the use of equipment. The equipment in the standard does not protect against a fall at all. What it will do is arrest a fall after it has happened. I recommend to the committee that the term fall arrest be used instead of fall protection.

I disagree with the questioner that A10.32 only addresses fall arrest. I agree wholeheartedly with the questioner that fall arrest is not a desirable condition. A10.32 seeks to define other kinds of personal fall protection that are far more desirable, for example fall restraint, where a harness is used but with a length of lanyard or other device that will prevent a worker from actually getting into a fall. Though not said directly, it is the belief of most safety professionals in construction that, just as there is a general hierarchy of hazard controls in safety (eliminate, control, warn), it is always more desirable to use guardrails and guarded platforms such as lifts first, personal fall protection second and nets last. Even within personal fall protection there is a hierarchy: fall restraint first and arrest second. If you look at OSHA Subpart M, guardrails, harnesses and nets are implied as somehow equal, which is nonsense. Again, we want to engineer out the potential for a fall altogether. But there are many operations in construction where the only real and practical method of performing the work involves the use of personal fall protection. That's really the reason for this standard – so that when you must use it, you use it well and that those that produce the equipment make it well.

3. Our organization reviewed the A10.32 Standard and believes it is much more stringent than what we saw with A10.14. But, we also use the Z359 ANSI General Industry Standard. Do we now have to go back and change to be in compliance with this standard also?

Although the questioner didn't indicate whether his/her place of employment is a general industry or construction environment, the question is best answered by reminding everyone of the scope and applicability of the two standards. In essence, the two standards are still voluntary consensus standards, not substantive rules or regulations. If you're a user and you are abiding by Z359, you're already ahead of the pack. In any case, the two standards are not so radically dissimilar for the users that where there may be conflicts, both the A10.32 and Z359 can't work through any conflicts. I should point out that construction, being the unique employment setting that it is (what with hard usage issues and all), dictated the more rigorous inspection criteria, the marking requirements, to be sufficiently protective for that industry.

Phil, two of the questions posed are similar questions and I'll ask them both at the same time:

4. How does this new standard relate to the OSHA Fall Arrest Standards under CFR 1926?
5. What are the plans of the committee in regard to having this standard addressed by OSHA? Should I follow this standard over what OSHA says?

The committee doesn't decide or cannot force OSHA to address this standard. But if you think back on when the scaffolding standard hit the streets, the Agency, rather than writing standards for lifts, in effect stated that compliance with the ANSI A92 standards constituted compliance. We don't have that situation here and OSHA's Subpart M is relatively new. Still, I believe most people in the Agency would agree that a standard that is more protective is always the more desirable standard to follow. Along those same lines. With respect to enforcement of certain areas of personal fall protection in this standard...

...Where an OSHA standard may be silent on a particular aspect of personal fall protection, it's my belief that the A10.32 standard's provisions could be used as basis for the industry recognition criteria necessary to sustain a general duty clause violation of OSHA. For example, the criteria for rope grabs is far more detailed in A10.32 than anything in OSHA. The industry recognition component of a general duty clause violation might be satisfied if A10.32 addresses it and OSHA does not. By way of further explanation, say a compliance officer observes the use of a rope grab designed for use on a vertical lifeline being used on a horizontal lifeline. The CSHO knows it's unsafe. There is no specific regulation on point. Serious physical harm is the likely resulting injury. **OSHA MAY ISSUE A GENERAL DUTY CLAUSE VIOLATION CITING A10.32 AS THE INDICATOR OF INDUSTRY RECOGNITION.**

We certainly encourage you to follow this standard if for no other reason than that it is more protective and clearer in terms of the use and limitations of this equipment. Remember, OSHA is always quick to point out that theirs are minimum standards. OSHA simply doesn't provide the detail that this standard does.

Phil, again, two of the questions posed are similar and I'll ask them together:

6. Can a competent person certify anchorages under this standard or does it have to be a qualified person? The standard does not call for it, but I believe that only a P.E. should be able to certify an anchorage.

and

7. I continue to hear that a qualified person must be an engineer, but the standard does not say that. How does this relate to current OSHA standards. I am asking because we have to address this with our labor unions we work with.

Neither a qualified person nor a competent person could technically “certify” an anchorage. Moreover, a qualified person, as defined by A10.32, would not necessarily be a licensed engineer. There are many persons in both general industry and construction who, by virtue of their “extensive experience” alone, would qualify as “qualified”. That is, there are many persons who have the knowledge and appreciation of the many hazards associated with simply using personal fall protection equipment, and who recognize, for example, when an engineering survey of the material make-up and/or capacities of structures and/or components of structures are necessary. In essence, a qualified person understands his/her limitations and areas of expertise. It's my belief that requiring an engineer to “stamp-off” on every anchorage or conduct an engineering survey for certain kinds of personal fall protection assemblies that are repeatedly used on project after project would place an undue burden on industry and serve little purpose in encouraging and advancing the use of such equipment.

So, in summary, sure we're going to be needing engineers. It's just a question of when and under what circumstances they're used. I did a fall protection survey recently and came up with the ideas but I knew I'd have to collaborate with a structural engineer on what I could expect from the overhead structures that were available to work with.

8. Why does the committee reference the 1990 version of the B117 Standard when there have been more recent versions of the standard released? Can we use the more current versions or is there something about this older version that makes it more appropriate for use?

Tim, I don't have an answer for this. Did a new B117 come out since publication? If not, we can simply reiterate our position that standards will always be evolving, that they are voluntary and that best practices would dictate the use of the most current standard?

9. How is rope access equipment impacted by this standard? From my read it is not cited at all, but in my opinion this is a mistake. Rope access equipment is being used on construction sites – specifically large scale public projects like dams and road construction in mountainous areas.

If you are referring to the kinds of equipment used for descent control, that is, specifically for lowering or for purposes of rescue or in some cases repelling, then no, the standard is not addressing that issue at this time. We only define descent control systems in the standard at this time. There are no subsections that provide specific requirements for their use. I do want to point out that such equipment that would be used in complying with rescue or retrieval requirements of our standard could very well involve that type of equipment. I have to say that my experiences with such equipment haven't always been favorable because of the problems with the rope – that it isn't easily inspected, that the rope, when subjected to intense friction and therefore heat, can part suddenly. On its outside the rope looks beautiful but its core has been literally destroyed. It's necessary that that type of equipment be used with extreme care.

I know Tim also has some additional thoughts on that...

10. In my view Section 6.6 basically states that fall protection equipment should not be exposed to a whole series of hazards that are on all construction sites. How do we implement this language?

Number one, by understanding that just as construction changes minute by minute, it is necessary that we conduct sufficiently “frequent and regular inspection” of the “equipment” we use in construction. OSHA 1926.20 (b) requires this. So does ANSI A10.32. Section 6.3 goes into considerable detail on the who, when and how of inspections. At a minimum, that amounts to inspection before use and inspection as work progresses. That’s inspection by a competent person and hopefully, if your workers’ level of training is up to snuff with this standard, by the workers themselves as the work progresses throughout the day.

Number two, by protecting it from degradation. It may be stating the obvious but I want to remind everyone that the life expectancy of this equipment is closely correlated with the conditions of use. For example, if you’re blasting and coating, an extreme working environment in anyone’s book, the life expectancy of this kind of equipment is going to be very short, if for no other reason than because the degree of solvent attack on webbing for example, simply can’t be quantified with any great precision. On the other hand, we can go far by providing proper storage for the equipment, by developing a turn-in and inspection protocol. We can also go far by training our workers about what to look for.

11. I am not clear, but the standard does not appear to have any type of required third party certification of products. I believe this is a weakness of the standard, and it should be included in future versions of the standard. Was third party certification considered by the committee and why was it not included?

Perhaps this is a question of semantics.

If by “third party certification” you mean examination, testing and certification of certain personal fall protection appliances or components by a recognized testing laboratory or equivalent, you are correct. A10.32 doesn't require it. But consider the many things in commerce for which no certification is required. Certainly one would think, for example, that children's car seats, which impact on a far larger population, would require a certification. All 50 states have laws that require them to “meet” a safety standard that was set by the Federal government in 1981. Similarly, fall protection appliances will very probably be labeled by their manufacturers as “meeting” A10.32. The manufacturer has a clear cut interest in quality assurance. I believe that the standard is consistent with the manner in which the universe of similarly “human – sensitive” kinds of products are manufactured and tested. I should point out that certain test requirements in the standard, such as those for carabiners and snap hooks, include proof testing by their manufacturers but that's not certification per se.

12. Please address the use of body belts. Several of the sections in the standard refer to waist belts and point out that waist belts cannot be used for fall arrest. The definition section points out that body belts cannot be used, and there is some tough language in there on their use. Section 5.2.6 then says that such equipment cannot be used – except as work positioning devices. That is pretty much what I have seen on construction sites so I am curious if my read on this is correct?

Waist belts and body belts are synonymous for purposes of A10.32, simply by definition. It's true they can no longer be used for fall arrest for the simple reason that the arresting forces from a fall would be transferred to vital organs such as the spleen, pancreas, kidneys, etc. They can be used for positioning and ladder climbing devices. Many full body harness assemblies also incorporate body-belts with d-rings at each side of the waist for positioning and climbing operations. To my way of thinking, the purchase of the most versatile, easy to wear harness, together with effective training, is key in getting users to understand the hazards of fall arrest and getting them to wear the proper equipment and wear it properly.

13. The way I read the standard is that a company better use a full body harness. If a company used a body belt they better make sure it was for work positioning only. Is my read correct on this issue?

In a word, yes. Just let me add that they are also acceptable for ladder climbing devices or what have also been called ladder safety devices, that is, the kind of system that incorporates a rope or track that runs up a fixed ladder.

14. Why can't the Z359 Committee and A10 Committee write one standard that can be used in all different industries? This is quite frustrating for my organization. We are already working with CFR 1910 and 1926. We use the ANSI standards as our guide since our view is that they are much stronger and more definitive than anything from OSHA. But, our company has hazards and exposures in construction and general industry. It would seem to me that one standard could be written. Can you comment on that?

First let me commend the questioner and his organization for using best practices such as those reflected by ANSI over minimum standards promulgated by OSHA.

I can understand the concern he or she raises about cross-over between construction and general industry. If I could suggest that you try to stay with the principles of fall protection, you will be well on your way to positive fall protection. As I've been trying to intimate through-out this presentation, much of what we've learned in the past five to eight years since OSHA's Subpart M first hit the street is that we don't want a fall. When we must use personal fall protection equipment, the principles for safe use are not that dissimilar. In my own mind, that means only selection of equipment that would serve both sectors of employment. Ultimately your organization will have to make decisions about selection based on sound fall protection principles. Remember, both Z359 and A10.32 are voluntary and already exceed OSHA. So you're already leagues ahead. Again congratulations.

15. I noted the standard does not address the issue of retrofitting equipment. We have taken fall arrest equipment and had it refurbished by a company. How is this addressed by the standard?

If by retrofitting you mean modification of components within a fall protection system, then the standard makes clear at 6.4 (compatibility) that the end product meets the intent of the standard.

If you are modifying an individual component to the extent that its manufactured rating may come in question, then you are effectively taking on responsibilities normally assumed by a fall protection equipment manufacturer. You then effectively have to perform the strength and force tests in Section 7, for example.

16. My view is that state and federal government is gutless in that they will not set one uniform height for fall arrest. I was disappointed to see that A10 also will not take a stand and address this issue. Why does A10.32 not establish a height that can be used by industry?

I like that word gutless. Them's fighten woyds! This standard recognizes that there are other standards that speak directly to certain types of activities and what kind of fall protection should be used. Not to rangle anyone's feathers but take structural steel or even residential construction. Both industries have spelled out work procedures and even set fall distances. The point of this standard is not to intrude on those individual standards but rather to establish standards for manufacture of the equipment itself and of course, safe use of the equipment when it does get used. Generally, those in medicine have asserted that we cross a certain threshold with respect to injury severity at 6'.

17. I have a question about copying the standard. I bought a copy, but have over fifty sites that I am responsible for. Since I bought a copy can I also make a copy for each jobsite if I list it cannot be taken off of the jobsite?

Tim?

18. What is ASSE going to do to move the standard forward? Along those lines – will we ever see another Z359.1 Standard?

Tim?

19. Why are the definitions different between the A10.32 and Z359.1 Standards? An example is the definition of lanyard. They are not the same, but I think they should be. We manufacture equipment used on construction sites and in general industry. We continue to have to explain to clients how our equipment will meet both standards, but having differing definitions has got to be fixed. I noted that ASSE itself even has a different definition in its Dictionary of Terms.

Tim?

20. We sell equipment used in the arborist industry. I think our equipment is included, but can you please clarify this issue for us?

Arborist services that perform tree trimming or timber work are not construction. They would be viewed, at least by their standard industrial classifications as agricultural or forestry operations and as such they're not considered construction. For that reason, I believe Z359 may be the applicable standard. I should point out that when you examine the kinds of body support configurations used by arborists (straps and the locations of D-rings, for example) (and there are many types of configurations on the market), the equipment's use is so unique. If you are a member of a trade association, then either you or your association should contact Z359 regarding applicability. I've looked at catalogues of leading manufacturers of fall protection equipment for arborists and they do assert that they "meet" Z359.

21. What about companies that still have stocks of equipment based on the A10.14 Standard? Can we still sell this equipment?

Tim?

22. I am new in construction and am still not sure what “Rope Grabs” are used for and what their utility is. I apologize to the attendees if this appears to be simplistic, but can you give me a summary of what a rope grab actually is?

A rope grab is a device that is attached to and travels along a lifeline (most typically a vertical line) and which engages the lifeline and locks to arrest the fall. It’s called a “fall arrester” in Z359. A very common scenario for the use of rope grabs is in the use of suspended staging where, for example, if a load line suspending the staging should part, the worker will be kept aloft by being attached to a harness and lanyard that is attached to a rope grab. You should understand that there are three types and that the most common problems encountered are their installation upside down, that workers don’t always keep them above their shoulder height (again, making for an increase in fall distance and arresting forces) and the use of six foot lanyards where shorter ones (and hence shorter fall distances) would be just as effective and certainly safer.

23. The standard talks about another standard when addressing training. What is the ANSI Z490.1 Standard? What does it cover and how do we coordinate the two standards?

ANSI Standards often refer to other standards that address a particular facet of an activity in greater detail. In Z490 you’ll find some excellent language bearing on effective training techniques for example.

Tim, perhaps you could add to that.

24. Section 6.2.2 talks about self-rescue. I am not sure what that means. I assume that if somebody needs to be rescued that means they could not do it themselves in the first place. I did not see how it was defined. How does this impact planning for rescue?

6.2.2 states: “A project-specific rescue plan shall be developed which will provide for a form of rescue for employees”. The paragraph before that states: “employees shall be trained in self rescue or alternate means shall be provided for prompt rescue in the event of a fall”. Employers basically have two options, they can train workers in self rescue and give them the equipment with which to do it or they must have alternate methods available with which to affect a rescue. Arguably, if workers are disabled, regardless of the equipment he/she is provided, they can’t rescue themselves. Implicit in this thinking is that no one should work alone with personal fall arrest equipment and that there should always be a plan for retrieval independent of the user. To my way of thinking, this is by far the most challenging and thought-provoking part of the A10.32 standard. It is certainly performance-based because it needs to be adaptable to a wide range of activities but most important, it places the issue in everyone’s face and makes them really address it. This will challenge us all to be innovative. Coming from construction, which is the most innovative industry I know, we’ll be seeing some real answers and then we’ll finally get this matter resolved.

Thanks for that excellent question.

25. I think the standard is better than the old A10.14 Standard. But, I am quite disgusted with the fact that the section on the job task analysis (Section 6.7) was one sentence. To me the most important way to stop falls is to do a proper hazard assessment, but this standard all but ignored it. I recommend that the committee put together some type of guidance materials on this as a way to do a proper hazard assessment.

The question makes two excellent points. This goes again to my thinking that any activity involving fall hazards should be analyzed and the hazard eliminated whenever possible. Read 6.7.1 very carefully and you may infer from the language that one should first determine whether no-less hazardous alternative method of fall protection (e.g. guarded platforms, lifts, etc.) is available before moving into the realm of personal fall protection. Notwithstanding the lack of clear-cut language, I believe the A10.32 does a good job of stating simply that a hazard analysis must be conducted, not how. Of course, the traditional methodology for hazard analysis has been around for decades and that's the methodology to be used.

Nigel Ellis has a very thought-provoking set of questions...

“Phil, the next question seems to be along those same lines. Our questioner asks”:

26. I am not sure about section 6.8.1 – why can a competent person not survey a site to see if fall protection equipment is needed. The way I read it is that under this standard the qualified person has to do it to see if there is protection from a free fall.

You say survey the site to see if fall protection is required. In that case, I'd agree. A competent person should certainly recognize fall hazards. But what 6.8.1 says is a little different. Once fall hazards are recognized, it's how you deal with them in terms of personal fall protection systems that gets things a little more complicated. Remember, a qualified person in this case, has the responsibility to examine the worksite to make determinations about critical things such as anchorages. Competent persons may not possess that level of knowledge.

But I want to read the standard so we're clear. 6.8.1 requires: “The worksite shall be surveyed by a qualified person to determine if the fall restraint system will provide protection from a free fall”. To me, that means when a fall restraint system is selected as the type of fall protection to be used, it must have the capacity to limit a free fall.

But if you go to the previous paragraph 6.7.1 it seems to suggest that a qualified or competent person can select the equipment to make sure that it will provide the desired protection. Now, I've put a big red asterisk by your question because it's going to get answered in a better way than I've been able to, but I did want to alert participants about this because it does appear to be ambiguous and it is an excellent question for the full committee.

27. Where do we get the test torsos? Is it the same torso used for the Z359 tests?

You can find them in the marital aids aisle at most any Wal-Mart or Target, right next to the crash dummies...just kidding. You can locate sources of test torsos from the Canadian Standards Association, the A10 Secretariat (that's Tim and the folks here at ASSE) and I'd also contact the International Safety Equipment Assn. Janice Comer Bradley of that organization would be your best contact. Dr. Bradley and her organization were very instrumental in the creation of this standard.

28. We have a new product and would like to have it tested by a lab to the new standard. Do you have any suggestions for testing labs?

We can't recommend labs because that would be an endorsement. Once again, I'd encourage you to speak with the International Safety Equipment Assn.

29. Why are manual locking carabiners not allowed by this standard?

Mostly, because of human factors. When used as a connector by a worker, this feature is critical because his/her concentration is not always guaranteed to be directed 100% at the connection. A worker, after all is concentrating on the work, not just the fall protection. The frequency of connecting and disconnecting is often sufficiently repetitive enough that of necessity, we want the connection to always lock of its own accord and not be solely dependant on the human being. This is a basic principle of good design.

30. Since A10.32 uses much of the Z359 testing methodology – why not just use the standard?

I have to confess that I haven't done a line for line comparison of the testing methodology. I'm neither an engineer nor am I really any more knowledgeable of engineering principles than most other safety professionals. But consider that the standards were written at different times, many of the people in the subgroups were on both A10.32 and Z359. My sense is that you'll see any disparities shake out in coming editions. Tim, perhaps you have some insights into this question.

31. Why should I use this standard when OSHA has a regulation?

The simple answer is that if you're complying with OSHA you're losing out on both the tremendous amount of new information that's come around since Subpart M was published in 1994 and that new information is now standardized and better explained in the guidance columns by A10.32. Keep in mind, Subpart M is heavy in the fall arrest department with little on positioning and restraint to say nothing of subsystem components like self-retracting lifelines and connectors.

Phil's notes re: A10.32

Safety professionals have long recognized that a hazard control measure should not pose a hazard unto itself.

Definitions: I do believe that standards generally could do more in the area of assignment of responsibilities. A10.32 seems to really shine in that area.

Certain questioners have indicated that the need for certain stronger requirements the go to general safety principles such as risk assessment. The horizontal standards used in the safety profession have been around for ages. That said, when a consensus standards such as A10.32 requires a hazard analysis, there are many authoritative sources on how to actually conduct such an analysis. Use those.

Gate types: look carefully at the product for the gate or keeper and always think to yourself, I've licked roll-out be buying locking snaphooks but what if, in a fall arrest, the connection between the lanyard and the shoulder D-ring or the lanyard and the connection to another system component such as a ropegrab could become dependant on the gate or keeper. For my money, gates poorly constructed or of less than substantial material can be a true Achilles heal in your fall protection system.

Phil's notes re: A1264:

Scope – person vs. employees – “these standards will be held up as exemplar. You should design plan and practice for every person”.

Mats should not secrete potentially hazardous conditions or be placed in locations where they may create hazards.

Slip resistance – what about expanding the standard to address step and fall issues.

Single stairs should be avoided or at least be installed with a color variation to attract attention.