

## ASME A17.6 FAQs

#	QUESTION	ANSWER
1.	Why is ASME A17.6 a separate standard rather than simply a part of ASME A17.1/CSA B44?	Because ASME A17.6 affects many different elevator requirements, the ASME A17.6 language would be scattered throughout ASME A17.1/CSA B44 and difficult to use. Having all the information in a single contiguous document is a big advantage.
2.	Why is ASME A17.6 not a bi-national standard like ASME A17.1/CSA B44?	ANSI & the Standards Council of Canada (SCC) typically do not support the development of standards that overlap the scope of ISO standards, which the Steel Wire Ropes (SWRs) portion of ASME A17.6 does. However, the ISO standard does not include imperial dimensions. Therefore, ANSI was prepared to support the development of this standard. SCC was not approached initially as their general preference is for all metric standards. The ASME A17.6 is, however, applicable in Canada as well as in the US, because it is referenced by A17.1/B44. Further action is unnecessary because there is no disadvantage to ASME A17.6 not being a bilateral standard.
3.	Does the monitoring system have to remain with the elevator if the maintenance company is changed?	For elevators fitted with AFRs or CSBs, A17.1-2010/CSA B44-10 requires that a means be provided to ensure that the elevator is stopped if the residual strength of any suspension member is reduced to 60% of the minimum breaking strength. If the means of performing this is removed, it would constitute a violation of the ASME A17.1-2010/CSA B44-10 version of the Code if adopted in a jurisdiction.
4.	Will the existing AFR and CSB installations get updated with the monitoring system?	No, these installations are governed by the variances and equivalent safety rulings that the AHJs granted when they were installed. The ASME A17.6 Standard and ASME A17.1-2010/CSA B44-10 Code are not retroactive.
5.	Why is Aramid Fiber Rope included in ASME A17.6 in the light of the failure in Seattle?	The failed AFRs in Seattle would not have met the requirements of ASME A17.6 nor ASME A17.1-2010/CSA B44-10. Besides the material properties, they clearly did not meet the 60% residual strength requirement that would have stopped the elevator when the residual strength decreased to 60% of the minimum breaking strength of the rope. They also did not meet the requirements for the broken suspension member detection system that would have stopped the elevator when the first rope parted. It is necessary to meet all of the requirements of ASME A17.6 and ASME A17.1-2010/CSA B44-10. If the requirements of the standard are met, AFRs are perfectly safe and suitable for use.
6.	Why do governor ropes greater than 9.5 mm have a lower factor of safety than smaller	Based on long term experience in North America, a minimum factor of safety of 5 is required for governor ropes not less than 9.5mm. Smaller diameter

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	diameter ropes? What is the minimum governor rope size permitted?	governor ropes have been safely used for many years with factors of safety of 8 in countries using the EN81 Code. In allowing governor rope sizes not less than 6mm, ASME A17.1/CSA B44 leverages the long term experience of countries enforcing the EN 81 Code. Thus a factor of safety of 8 is required for governor ropes less than 9.5mm. The minimum governor rope size permitted is 6mm.
7.	There does not appear to be a tolerance on tension on any of the suspension means. Is this an oversight?	There has never been a specified value for suspension means tension tolerance in the ASME A17.1/CSA B44 Code. The committee recognizes that such a value would be helpful to installation and maintenance personnel, and is in the process of developing code requirements to address this issue and these will be published in the next edition.
8.	Can a jurisdiction adopt ASME A17.6 if it is on an earlier version of the ASME A17.1/CSA B44 Code?	ASME A17.6 is a reference standard and is called up by ASME A17.1-2010/CSA B44-10, which has the requirements for factors of safety, terminations, engineering tests and systems related issues. Adopting the ASME A17.6 in conjunction with an earlier code will require some additional language to address these issues.
9.	The summary table in the presentation indicated you can use the factor of safety per the requirement 2.20.3 as well as best engineering practice. Does this mean you can use a lower factor of safety?	No, you can't use a lower factor of safety than that specified in 2.20.3. For particular designs, the manufacturer needs to consider whether a higher factor of safety is required based on best engineering practice.
10.	Are the new testing standards going to apply to elevators that are modernized but the existing machine is retained?	The requirements related to alternations in ASME A17.1-2010/CSA B44-10 apply to all modernized elevators. The appropriate testing for a particular installation depends on the nature of the alternation.
11.	What type of device is required to determine when the 60% limit is reached on currently installed and operating suspension means?	Currently installed suspension means permitted under local variance or equivalent safety determinations are covered by the local rulings. ASME A17.1-2010/CSA B44-10 does not have retroactive requirements in this regard.
12.	What is the most common method used to monitor and detect broken suspension means?	The most common way of establishing a broken rope or broken suspension member generally requires a spring-loaded device with a switch. The tension of the rope keeps the spring-loaded device in contact with the switch, and if the rope breaks, the spring would drive the device away from the switch. In this case, the switch would then cut power to the motor and actuate the brake. The ASME A17.1-2010/CSA B44-10 code requires the switch to be wired in a fail-safe manner, so that if for some reason the circuit was interrupted, the elevator would read that as if there

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		was a broken rope and the elevator would be stopped by the brake.
13.	What happens to the traction as the hoist cables get smaller?	The responsibility lies with the manufacturers to address this issue when designing suspension means that wear with time, and the grooves that they sit in. Currently, the code doesn't address day-to-day traction. There are general traction requirements in the code that have to be met throughout the life of the rope. The onus is on the manufacturer to make sure that a suspension means that wears and changes geometry with time continues to work throughout its life.
14.	Is the four-minute traction slip test the only required for an engineering test? Can the authority having jurisdiction require this test in the field?	This is purely an engineering test that is intended to establish the robustness of the suspension member to ensure that if there was some form of slipping that took place, the suspension means isn't going to suddenly fail. The traction slip test purely provides engineers with an extra sense of precaution. However, the authority having jurisdiction could request the test report, so that they can confirm that the test was, in fact, successfully completed.
15.	Why was ASME A17.6 not made to be retroactive considering there are several installations that do not have monitoring means now?	ASME A17.6 is a reference standard. It is called for by ASME A17.1-2010/CSA B44-10, so ASME A17.6 in itself is not a stand-alone code. Because ASME A17.1/CSA B44 is not retroactive, ASME A17.6 cannot be retroactive either. The purpose of ASME A17.1/CSA B44 is to provide a clear forward-looking approach to equipment in the future. ASME A17.3 deals with existing elevators, so if someone was looking for retroactive requirements, they should look to ASME A17.3. At this stage, however, ASME A17.3 doesn't address suspension members other than steel wire wraps.
16.	What elevator manufacturer is using the TR12 aramid fiber rope presently?	The Twin Rope 12 rope (TR12), as well as the SR80 aramid ropes were used principally in Europe by Schindler Elevator. They have been used there on a limited basis for close to 10 years. They have not yet been introduced in the U.S.
17.	How are CSBs installed prior to the code under a variance handled, since they now meet the code, but didn't in the past?	When something is approved by a variance, the terms of the variance apply for the life of that elevator. Because ASME A17.6 is a reference standard called for by ASME A17.1/CSA B44, it is not retroactive. As such, CSBs installed under a variance prior to the code are not subject to the requirements of ASME A17.1-2010/CSA B44-10. However, future units installed in locations where ASME A17.1-2010/CSA B44-10 has been adopted would, of course, have to follow the requirements of the code.
18.	Is the NEII ASME A17.6	Yes, the presentation will be available on the NEII

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	Suspension Means Standard Webinar still available to view online?	website through December 2011 for viewing. Simply enter your name and e-mail address to register and you will be able to access the presentation slides and audio.

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Request for official interpretation of ASME A17.1/CSA B44, ASME A17.3 and ASME A17.6 should be directed to the ASME A17 Committee. Instructions for requesting interpretations can be found in preface of the applicable document.