EXCEL TRIBOMETERS, LLC SLIPMETER SCIENCE, TECHNOLOGY, MANUFACTURE, SERVICE

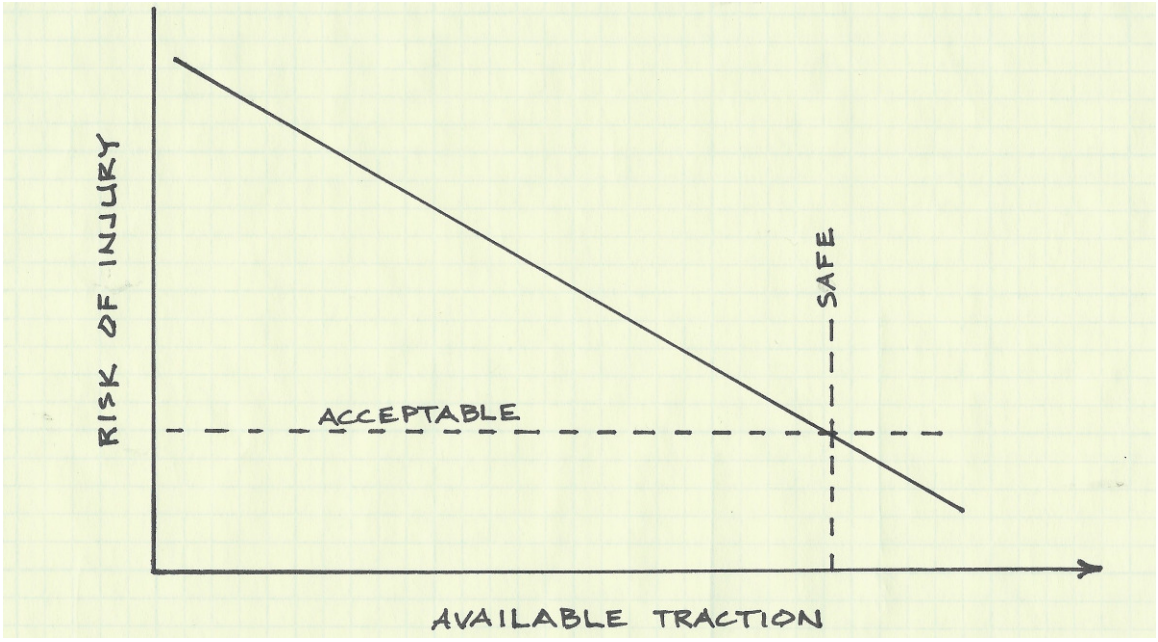
Newsletter

December 19, 2013

??? WHAT DOES 0.50 MEAN ???

The English XL VIT is a scientific instrument that meters a ***value for available slip resistance*** for the particular circumstance being measured. Ultimately, you will have to rely on your application of the sciences highlighted in the CXLT program and contained in the numerous credible authoritative references, together with your professional training, experience and judgment, to determine the extent to which any of your results are meaningful in the context of your analysis, whether you are evaluating a material or product, a specific injury event, or assessing the overall safety of a walking surface.

In most circumstances, the significance of your metered value of available traction is evaluated on the basis of the ***level of safety*** implied by the value. Applying the principles of safety engineering and risk management to walkway safety, a slip resistance value for the ***available traction*** is defined as ***safe*** when the ***risk of injury*** or probability for a human slip and fall injury event is reduced to an ***acceptable*** level. The following is a graphic representation of the concept.



As a ***starting point***, the many available studies where ground reaction forces during human ambulation are measured with force plates show that the traction demand is in the range of **0.25 to 0.35** for straight-line unloaded walking at a person's normal speed. Keep in mind the preponderance of the data that supports that range of required slip resistance is derived from ***test subjects*** who are pre-qualified as healthy, and who are studied in a laboratory environment.

The risk for ***real-world*** slip and fall injury and death is not limited to laboratory conditions. As in any similarly designed systems, a factor of ignorance/***factor of safety*** must be applied to address the degree of uncertainty associated with the lack of precision of knowledge as applied to the real-world at-risk population and the extent of variations in physiology, neurology and gait dynamics, among other significant human factor variables, plus considerations for the variability of tasks and associated traction demands.

A brief trip to the design texts gives us a basis for assigning a factor of safety associated with the degrees of uncertainties, consequences of failure, and desired reliability of the system. With due professional diligence, a ***factor of safety of 2.0*** is determined to be reasonable from the applicable considerations, which thus produces the historically significant ***criteria for safety of 0.50***.

Anecdotally, for those who have studied real-world slip and fall injury and death events, and measured available slip resistance of the walking surfaces associated with the events, the empirical data strongly supports the criteria for safety of 0.50 as achieving an ***acceptable risk of injury*** for circumstances generally encountered by the public. Some people have a hard time accepting the concept of "acceptable." For them, you have to be familiar with the data from the NHSTB and the Bureau of Labor Statistics to demonstrate the level of risk people accept as acceptable when they travel in a car or go to work.

Anyone who represents that a measured slip resistance of 0.48 is dangerous, or that a measured slip resistance of 0.52 will prohibit slip and fall injury events must re-educate themselves to understand that the concept of safety deals with probabilities and acceptable levels of risk, and is not absolute or finite. People will still slip, fall and be injured even if the available slip resistance exceeds the criteria for safety for the given circumstances, however rarely that might occur. Conversely, not everyone will slip, fall and be injured at values less than the criteria for safety, however too many will.

Achieving walkway safety includes identification, assessment and control of real-world risk for slip and fall injury and death. Meaningful tribometry should give us the science and technology to perform those tasks. Fortunately, the historical research associated with the studies that produced the starting point laboratory range of 0.25 to 0.35 proved available slip resistance measured with the English XL VIT correlated well with the force plate measurements with so we can say that the criteria for safety correlates with the results using the English XL VIT.

NEW CERTIFIED XL TRIBOMETRISTS

The December 2013 CXLT Program once again received strong support and rave reviews. The new and returning CXLT's now entitled to use the CXLT designation are listed below and on the website (click here for the CXLT Registry). Congratulations to all!

Michael N. Bohrer	Rimkus Consulting Group	
Robin Scott Caulfield	Rimkus Consulting Group	
Bryan R. Emond	SEA Limited	Current CXLT
Phillip A. Gardner, P.E.	US Forensic	
Kevin Hong	Vancouver Airport Authority	Current CXLT
Jordan R. Kays	Rimkus Consulting Group	
Carlyn Marrano	Pierce Manufacturing	
Timothy J. Moore P.E.	Moore Engineering and Consulting Inc	
T. Scott Nunnery	Rimkus Consulting Group	
Ryan D. Paolantonio	Rimkus Consulting Group	
Christopher Romo	Collision and Injury Dynamics	
Michael Sartor	Haag Engineering	Current CXLT
Irving S. Scher	Guidance Engineering	Current CXLT
Matthew Smith	Nelson Architectural Engineers	
Michael D. Stapleford	JCB Forensic Engineering Consultants	Current CXLT
Thien-Tu Tran To	Biomechanical Research and Testing	
Joe D. Webb	Rimkus Consulting Group	
Lawrence Wedderstrand	Rimkus Consulting Group	
David P. Wills	Exponent	
Anne Yatco	Institute of Risk and Safety Analyses	

NEXT CXLT PROGRAM: Houston, TX

The next **CXLT Certification Program** will be conducted by **EXCEL TRIBOMETERS, LLC** on Wednesday, January 29, 2014, in Houston, TX, at the Hyatt Place Houston, 300 Ronan Park Place, Houston, TX, where a block of rooms has been reserved at a special rate of $129.00. The rate is available for a limited time, as is space in the Program, so book early. Contact the hotel directly for room reservations at 281-820-6060.

The current program is constantly being improved to maximize the value for your investment, with expanded sciences and extensive hands-on instruction with the instrument. First time CXLT program participants, very experienced XL users who wanted a refresher, as well as CXLT's who chose to retake the course and the test to maintain their current status have all touted the program.

To read comments received, check out: CXLT Program Testimonials

ALL ENGLISH XL VIT OWNERS SHOULD CONSIDER THE CXLT PROGRAM

Of course, we encourage anyone who owns an English XL VIT who has never taken the program to please do so in order to ensure your compliance with both the understanding of the science and principles of walkway safety and slip resistance metering, as well as proper and accurate use of the English XL VIT. Please consider the importance of your participation.

Holding the CXLT certification assures your ***recognition and respect*** as an expert who is knowledgeable, competent, and proficient in walkway safety, meaningful tribometry, and in the use of the English XL VIT. Anyone who wants to perform a competent risk assessment of a walkway, or evaluate flooring and footwear products, needs to establish a strong foundation in the principles of safety engineering, the sciences of walkway safety, the scientific and mechanical aspects of the available slipmeters, and the effects of reasonably foreseeable variables on the performance of walkways and slipmeters. The certification also shows the CXLT had extensive hands-on instruction in the proper use of the English XL VIT and proved his or her proficiency with the most respected slip meter.

Make sure you review the ***updated and expanded*** CXLT Certification Program on the **EXCEL TRIBOMETERS, LLC** website. Also please keep in mind on-site programs are available if you are one of the many organizations that have a large staff who are interested in tribometry and walkway safety.

CXLT REGISTRY: CXLT'S-PLEASE MAKE SURE YOUR CONTACT INFORMATION IS CURRENT!

The CXLT certification has become such a **recognized, respected** and significant credential in the world of walkway safety and meaningful tribometry **EXCEL TRIBOMETERS, LLC** is regularly contacted by attorneys and other parties to verify whether people representing themselves in court as CXLT's actually are, and to see if they are current and in good standing.

Please check and make sure you are current. We do our best to send out reminders to alert you when the renewal process should be completed, but if your contact information changed, you are on your own to renew. Please make sure ***you*** keep us ***up to date*** with your contact information.

Unfortunately and regretfully, a few CXLT's are **revoked** every month for not renewing. Hopefully, they no longer need to be a CXLT; otherwise, they have lost a credential that is increasingly more important.

F2508 CALIBRATION

Do you need to have the F2508 Calibration performed on your XL? The best answer is "it depends." If you are in an environment where you need to represent you have an ASTM F2508 Validated walkway tribometer, then "yes" you need to have a current F2508 Calibration, since F2508 *Calibration* is part of the F2508 *Validation* process, as defined in the standard practice. The interval for F2508 Calibration is annual, as defined in the standard practice. Click here for a more extensive discussion (Newsletter Sept. 30, 2011).

EXCEL TRIBOMETERS, LLC offers F2508 Calibration for those who request it at the time of purchase of a new instrument for $750.00. For F2508 Calibration at any other time for any English XL VIT, the fee is $950.00. Due to the extensive testing required, please call ahead to schedule your F2508 Calibration.

INSTRUMENT CALIBRATION AND REFURBISHING SERVICE

Your English XL VIT is a scientific instrument and requires regular instrument calibration and refurbishing, as with any similar credible metering device. The fee for English XL VIT instrument calibration, if you are on time, is $250. For those of you who are not current and your slipmeter is overdue, we are offering new standard pricing of $350 plus parts, which encourages overdue English XL VIT users to bring their instrument up to date. The *English XL VIT instrument calibration* is ***not the same*** as the *F2508 calibration*, which is not the same as the *F2508 validation* testing and reporting. The extensive testing, on the four (4) reference surfaces, with special cleaning procedures and reagents, and the required calibration reporting, are all much more extensive than the English XL VIT calibration and refurbishing.

Please keep in mind that if you maintain your tribometer by sending it for the English XL VIT instrument calibration service at the proper intervals, ***we will repair anything*** within 6 months following service, for shipping costs only, unless there is clear evidence of physical abuse or extraordinarily extensive use. Some machines are shared by many and used constantly. Those slipmeters need servicing more often.

Note our **updated mailing address** that provides a more secure facility for receiving your equipment.

We ***value your input*** and questions, and look forward to hearing from you. All of your comments and concerns are welcome and will be thoroughly addressed. Your communications are treated with respect, and kept in the strictest of confidence. You may contact Peter directly at 757-897-2853, or by email at *pwidas@exceltribometers.com*

Thank you for your participation in the continuing efforts for advancements in the field of walkway safety and meaningful tribometry.

Peter Widas, BSMSE, CXLT, Vice President, Chief Operating Officer

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