CXLT Certification Program
Program Outline

BASIC SAFETY ENGINEERING PRINCIPLES

- Methodologies related to walkway safety and footwear safety.

DEFINE THE HAZARD

- Possibilities for slip and fall injury and in various environments and circumstances.
- Define human ambulation dynamics, stride phases and length, heel strike velocity, the ankle, biofeedback, and expectation.
- Physics of slipping. When do slips occur?
- Define *required* slip resistance and *available* slip resistance.
- Rationale for 0.50, and what does it mean.

ASSESS THE RISK

- Probabilities and magnitudes for injury and loss.
- Accurate reporting of fall injury events.

MITIGATE HAZARDS OF SIGNIFICANT RISK

- Measure *available* slip resistance, then compare with *required* slip resistance, to identify materials and conditions of significant risk.
- Define measures to correct conditions where the *available* slip resistance is less than the *required* slip resistance, including increase the *available* slip resistance, restrict access/exposure, and/or provide warnings.
- Factors that affect traction.
- Control the risk.

SLIPMETER TECHNOLOGY: MEASURE AVAILABLE SLIP RESISTANCE

- What is slip resistance, SCOF and DCOF. What about roughness?
- Must measure contaminated as well as clean and dry.

- Liquid contaminants: squeeze film, sticktion, residence time.
- Available slipmeter technology, historical and current.
- Test foot material.
- Why the reference tile? How slippery is ice?
- References, standards and codes

COMPETENT OPERATION OF THE ENGLISH XL VIT

- Objectives: precision and consistency.
- Hands-on demonstrations and practice throughout the program.
- Basic principles of operation.
- The XL VIT machine: significant components, their functions, and what effects proper functioning.
- Loading the CO2 cartridge, using the regulator and setting actuation pressure.
- Proper firing of the slip meter: operator positions, grips, pressing the actuator button, timing of actuations, duration of application of force, delay between actuations to achieve a quiet cylinder and stable pressure, and other techniques.
- Test foot preparation, cleaning the test foot, and how test foot conditions effect results.
- Calibration of the test foot, significance of variations, remedies.
- Setup at the sampling location, and test surface preparation.
- Dry, wet-with-water, and special test conditions.
- Orthogonal test directions, and other test locations.
- Directional properties of test surfaces.
- Results patterns, when is enough enough?
- Absorptive and contaminated materials.
- Temperature and relative humidity affects on the slip meter and at the sampling location.
- Testing stairs treads.
- Testing grossly textured surfaces.
- Cleaning, storage, and shipping of your slip meter.
- Maintenance of your slip meter.

DOCUMENTATION METHODS

- Recording test results.
- Reporting test results

INDIVIDUAL OPERTIONAL COMPETENCY VERIFICATION DEMONSTRATION

SHORT ANSWER WRITTEN EXAMINATION ON WALKWAY SAFETY AND SLIP RESISTANCE SCIENCE AND TECHNOLOGY

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