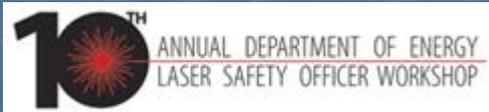


Electrical Safety 101 for the Laser Safety Officer

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August 19-21, 2014



Abstract

- The rules which construct the electrical safety envelope for lasers at DOE facilities will be stated. Then several electrical safety techniques will be shown that apply to commercial and R&D lasers. Examples of how to use grounding, bonding and guarding will be given. Failures of water cooling that may lead to shocks will be detailed. Human response to shock will be discussed.

- Author Biography

- Gary R. Dreifuerst is a retired electronics engineer from Lawrence Livermore National Laboratory (LLNL). He joined LLNL in June 1981 after receiving his EE PhD degree from the University of Wisconsin-Madison.
- He worked in the LLNL Laser programs (Shiva, Novette, Nova, AVLIS, NIF) for 32 years. Gary was the Electrical Safety Officer for the National Ignition Facility and the chair of the LLNL Electrical Safety Committee.