Georgia Institute of Technology
Capstone Project
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Project 18: TranzVolt 2.0
Codes and Standards

1. **1C - AIEE Test Code for Evaluation of Systems of Insulating Materials for Random-Wound Electric Machinery**
   a. https://ieeexplore.ieee.org/document/7369899
   b. "AIEE Test Code for Evaluation of Systems of Insulating Materials for Random-Wound Electric Machinery," in *AIEE No.1C-1954* , vol., no., pp.1-12, 12 Jan. 1954, doi: 10.1109/IEEESTD.1954.7369899.
   c. This test code has been prepared in the hope that it will serve as a useful guide for the evaluation of insulation systems for random wound rotating electric machines, and to establish a sound basis for their temperature classification. Once this is accomplished in orderly and organized fashion, the problems of insulation selection for use in electric apparatus should be simplified.

2. **C2-2017 - 2017 National Electrical Safety Code(R) (NESC(R))**
   a. https://ieeexplore.ieee.org/document/7526279
   b. "2017 National Electrical Safety Code(R) (NESC(R))," in *2017 National Electrical Safety Code(R) (NESC(R))* , vol., no., pp.1-405, 1 Aug. 2016, doi: 10.1109/IEEESTD.2016.7526279.
   c. This Code covers basic provisions for safeguarding of persons from hazards arising from the installation, operation, or maintenance of (1) conductors and equipment in electric supply stations, and (2) overhead and underground electric supply and communication lines. It also includes work rules for the construction, maintenance, and operation of electric supply and communication lines and equipment. The Code is applicable to the systems and equipment operated by utilities, or similar systems and equipment, of an industrial establishment or complex under the control of qualified persons.

3. **27A-1941 - AIEE Switchgear Assemblies**
   a. https://ieeexplore.ieee.org/document/7393408
   b. "AIEE Switchgear Assemblies," in *AIEE No 27A-1941 (Proposed Revision of AIEE No-27)* , vol., no., pp.1-12, 28 Feb. 1941, doi: 10.1109/IEEESTD.1941.7393408.
   c. These standards cover assemblies of switchgear devices such as switches, interrupting devices, control, metering, protective and regulating equipment with associated interconnections and supporting structures. These standards do not apply to industrial control equipment, communication switchboards and switching equipment, or switchboards for shipboard.

4. **4-2013 - IEEE Standard for High-Voltage Testing Techniques**
   a. https://ieeexplore.ieee.org/document/6515981
   b. "IEEE Standard for High-Voltage Testing Techniques," in *IEEE Std 4-2013 (Revision of IEEE Std 4-1995)* , vol., no., pp.1-213, 10 May 2013, doi: 10.1109/IEEESTD.2013.6515981.
   c. Standard methods and basic techniques for high-voltage testing applicable to all types of apparatus for alternating voltages, direct voltages, lightning impulse voltages, switching impulse voltages, and impulse currents are established in this standard. Sections that deal with alternating voltage, direct voltage, and impulse testing are combined in this revision to organize the technical content for ease of use. In addition, the concept of measurement uncertainty in evaluation of high-voltage and high-current tests is introduced in this version.