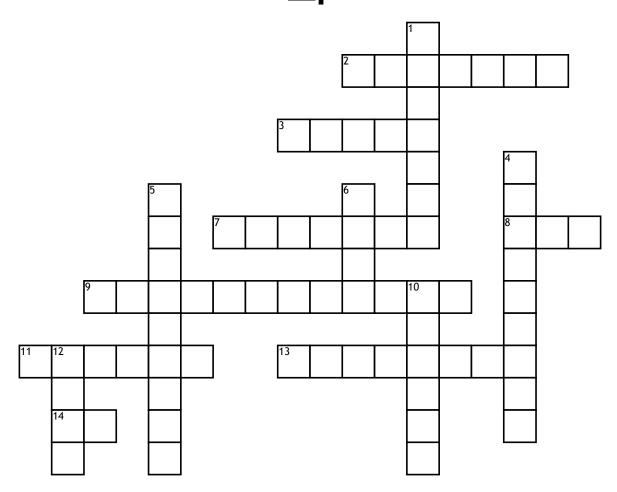
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## MET047\_puzzle 1



## **Across**

- 2. BALTO equipment was originally developed to test high-speed DC circuit breakers, but its ability to generate high currents for a relatively long period of time means that it can also be used to test
- \_\_\_\_\_-magnetic breakers of the type typically found in marine applications.
- **3.** A test that is growing in use on site to verify the ground wall insulation of the stator winding.
- 7. Narrowband DFR testing is in increased use on these assets because of its ability to detect insulation problems much earlier than possible with PF tests.
- **8.** Protection widely used to protect generators and transformers against earth faults
- **9.** A.k.a., the online International Electrotechnical Vocabulary (IEV online)

- 11. An IEEE conference that deliberately nurtures collaboration between academia and industry.
- 13. A format for files containing transient waveform and event data collected from power systems or power system models
- 14. Cosine rectangular testing allows VLF withstand and \_\_\_\_ tests to be performed at the same time because the applied voltage has a fundamental frequency of 0.1 Hz, but during polarity reversal, dV/dt is close to that of a power frequency sine wave.

## Down

1. Abnormal \_\_\_\_\_\_ is one of the most common causes of problems in electrical systems and is invariably associated with unusually high resistance or excessive current flow.

- **4.** Several North American electrical utilities have successfully implemented DC insulation resistance testing programs for these assets.
- 5. The point on the magnetisation curve where increasing the supply voltage by 10 % causes the current to double.
- **6.** The number of examples given in this issue's feature article of what can be tested virtually with the 'open loop method'
- **10.** The alternating-current that electric motors and transformers may draw when first energized, typically of magnitude several times their normal full-load current
- 12. \_\_\_\_ patterns give invaluable information about the type or types of partial discharge within a machine (and locations involved) because defects in stator insulation cause specific types of PD activity.