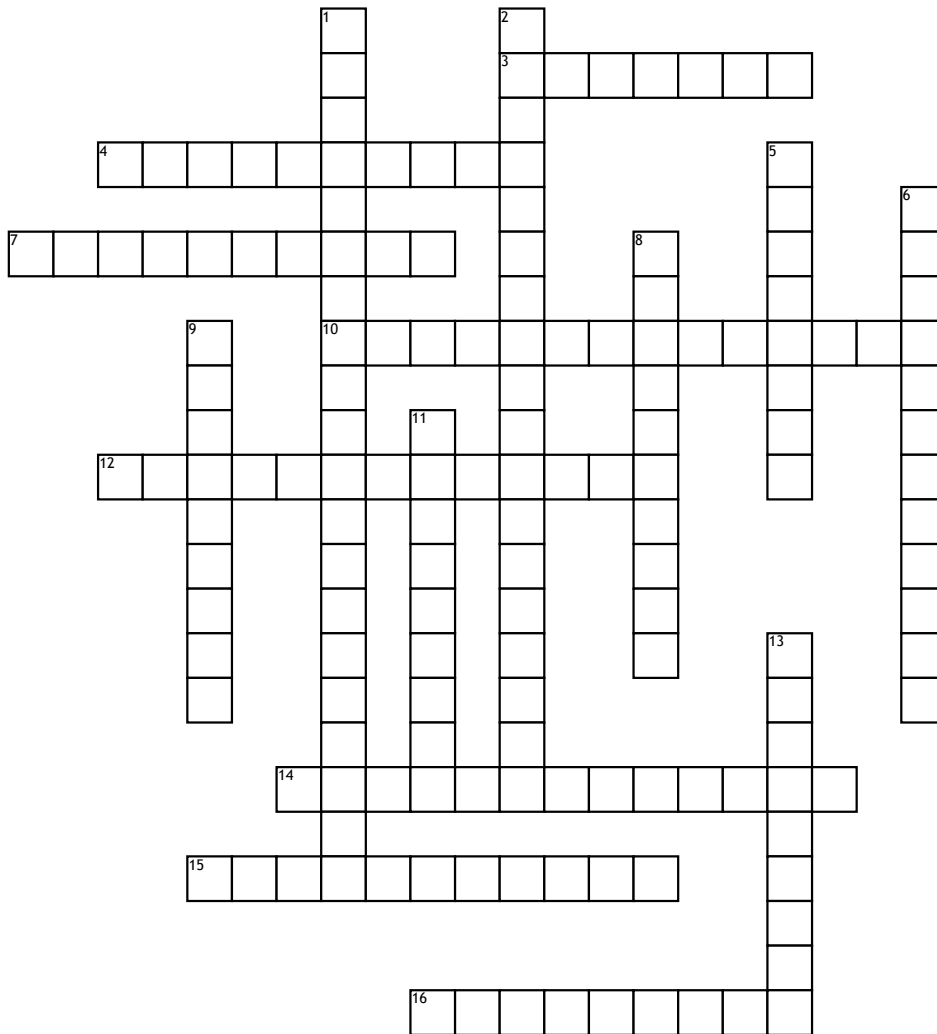


# Electromagnetic Testing



## Across

3. Distance between the probe coil and the test object

4. angular equivalent of the time displacement between corresponding points on two sine waves of the same frequency

7. nondestructive test equipment response to a discontinuity that requires interpretation to determine its relevance

10. Coil that carries the excitation of indication current.

12. ferromagnetic core surrounded by a coil of wire that temporarily becomes magnet when an electric current flows through the wire

14. Electric current flowing continually in one direction through a conductor without variation in amplitude

15. electrical current induced in a conductor by a time-varying magnetic field

16. difference between the cutoff frequencies of a band pass filter

## Down

1. Ratio of the permeability of the material to the permeability of a vacuum

2. electrical current that reverses its direction at regular intervals

5. section of a coil assembly that excites or detects the magnetic field in the material under electromagnetic test

6. semi conductor element that produces an output electromotive force proportional to the product of the magnetic field intensity and a biasing current

8. having properties that differ according to the direction of measurement

9. opposition that a circuit presents to the flow of an alternating current, specifically the complex quotient of voltage divided by current

11. Opposition that a circuit presents to the flow of an alternating current, specifically the complex quotient of voltage divided by current

13. standard depth of penetration

## Word Bank

electromagnet

direct current

anisotropy

liftoff

phase angle

indication

skin depth

eddy current

excitation coil

test coil

relative permeability

impedance

impedance

hall detector

alternating current

bandwidth