

**P07**

### **Subsurface Utility Detection Using Electromagnetic Locator**

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#### **ABSTRACT**

An electromagnetic locator is a device that uses electromagnetic fields to locate underground utilities and other objects. It emits a low-frequency electromagnetic signal and detects the response from nearby metallic or conductive objects. The strength and direction of the reaction can be used to determine the location and depth of the thing. Electromagnetic locators are commonly used in construction, engineering, and utility industries to locate buried cables, pipes, and other infrastructure. This paper will discuss the overview of the electromagnetic locator, its working principle, and the ideal method to be used in different utility locating and mapping situations. The advantages of having this instrument and how its data can be correlated with other utility-locating devices to ensure a high level of accuracy when doing utility mapping will also be covered. Overall, this study will reflect the importance of doing Non-Destructive Testing for a safe operation and excellent time and cost optimization.

**Keywords:** *electromagnetic locator, pipe and cable locator, subsurface utility, detection*