

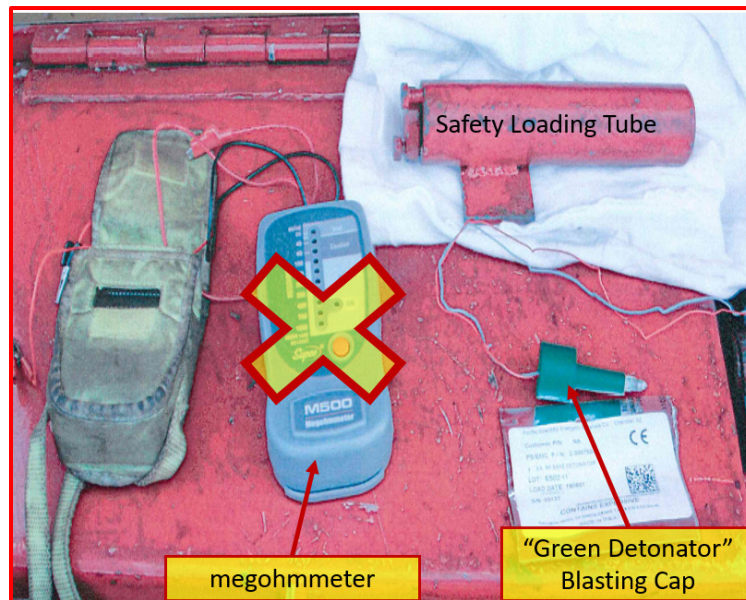
# SAFETY ALERT



**Safety Alert No. 372**  
**December 5, 2019**

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## **Improper Use of Equipment Causes Blasting Cap Misfire**



*Improper meter is used to test unshielded blasting cap.*

On September 22, 2019, an electric line operator was injured when a “Green Detonator” blasting cap ignited while he performed a continuity test using a megohmmeter. The incident occurred at an offshore facility while preparing for tubing cutting operations.

The operator performed continuity tests on a wireline shock sub tool using a megohmmeter then attempted to test the “Green Detonator” blasting cap with the same meter. The operator did not follow standard operational protocol and did not use the proper tool to test the detonator. In addition, the blasting cap was not placed inside a safety loading tube prior to testing.

American Petroleum Institute (API) Recommended Practice 67 states, “only instruments recommended for use when testing electrical detonators and detonator circuits are those specifically designed and/or qualified for checking explosives and explosives circuits. The test current from the meter used to perform resistance checks shall not exceed 25 milliamperes or 10% of the no-fire rating of the detonator in the circuit, whichever is less.”

**Therefore, BSEE recommends operators and contractors consider the following:**

- During explosive operations, personnel must follow operating procedures and use the correct tools and equipment for the task.
- Ensure field personnel have completed appropriate explosive training;
- Consider a two-person sign off requirement of safe operating procedures prior to initiating all explosive operations;
- Discuss explosive hazards during pre-job safety meetings;
- Ensure a detailed procedure is available for reference during an explosive operation;
- Label megohmmeters and other electrical testing equipment with a warning not to use for testing explosive caps;
- Review and update operational procedures as necessary to maintain its accuracy and encourage compliance; and,
- Provide regular training (both in-classroom and hands-on) on explosive usage and proper equipment identification and labeling.

Due to the frequency of similar testing across the industry, BSEE is issuing this Safety Alert prior to the conclusion of an ongoing investigation. If BSEE's investigation reveals additional pertinent information, another Safety Alert will be issued.

--BSEE--

A Safety Alert is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding a potential safety issue. It also contains recommendations that could assist avoiding potential incidents on the Outer Continental Shelf.