

# Safety

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Safety Safety has been a concern to many organization and industries.

Today, more and more caution is being taken to ensure the environments of work are safe and secured at all times. For instance in hybrid rocket test there are various safety precautions that are to be followed. One important fact is that prior to the test day the weather must consideration. More specifically, very rainy or extreme snow would demand the call of the test. Additionally, operational staff must keep distance, and it is recommended that the distance be maintained at 25 foot off the ignition zone.

Before ignition process likewise, it is important that all the personnel on the site should be well acquainted by the attached FMEA. FMEA provides for systematic and qualitative tool, typically created from a spreadsheet during the testing, to assist the personnel anticipate what can go wrong with the process, and then to develop plans to mitigate various risk of failure. It is important to point out that all the debris from the test site must all be cleaned up before setup. Despite the distance, they should always ensure they wear protective gear for both their ears and eyes. This ensures that they are protected at all time with the sound and any unforeseen eye direct infection. However, all these are only done after a 10-12 second countdown to ignition has been in place to ensure every at the site is attentive. The testing is procedural to ensure safety at all times and whenever ignition is not in place, the rocket must be covered by a cap and all materials will be stored safely after are disassembled by the in-charge at the site. Likewise, Subscription to all Smart Monitoring System is also provided. All chemical materials containers and must be easily stored and transport availed to and from the test area. Connected to this is the fact that the ventilation system & emergency light must be provided based on site size.

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Nonetheless, instances misfire are common during testing. In case of such, the first thing to do is to close the remote bottle opener and immediately put off the main power supply. This procedure is important as it ensures deactivation of the closed solenoid. After successfully doing this, it is important to give an allowance of about 70 seconds before anyone can approach the rocket motor housing. Safety before and after the ignition is of importance since if the assumption is made and some of the safety precautions are ignored, it may be risky to the operators and likewise losses may be incurred unnecessarily.

When the process of testing is completed, there are various safety requirements that must be followed to ensure safety to the end. One of such is disassembling of the test fixture and here the operator in charge that must always wear relevant personal protection equipment this may include heat resistant gloves. Finally, there is need always to avail the first aid kit so as that all the minor injuries can be handled at the site, and the personnel assisted promptly.

## References

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Pelton, J. N., & Jakhu, R. (2010). Space safety regulations and standards. Oxford: Butterworth-Heinemann.

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