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AEROSPACE INFORMATION REPORT

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ROCKET IGNITION AND RELATED NOMENCLATURE

1. SCOPE

- 1.1 This information report provides a short glossary of rocket ignition and related terms.
- 1.2 Certain definitions have been established for terms not included in the reference documents used in its preparation.
- 1.3 An attempt has been made in this information report to resolve the conflicts that exist in the referenced documents.

2. REFERENCES - The following source material was consulted in preparing this glossary and should be considered in the order shown:

- a. "Nomenclature and Definitions in the Ammunition Area", MIL-STD-444.
- b. "Ordnance Technical Terminology", ST 9-152, U. S. Army Ordnance School, Aberdeen Proving Ground, Maryland.
- c. "Military Terms, Abbreviations and Symbols", AR 320-5.
- d. "Missile Engineering Handbook", C. W. Besserer, D. Van Nostrand Co., Inc., 1958.

3. TECHNICAL GLOSSARY

3.1 Devices

1. All Fire - The minimum stimulus which must be applied to an EED for initiation under specified environmental conditions and reliability requirements.
2. APU (Auxiliary Power Unit) - A propellant powered device used to generate electrical, gas or fluid power independent of the main propulsion unit.
3. Booster - (a) An intermediate explosive charge to augment the initiating component of an explosive train and cause detonation or deflagration of the main explosive charge; (b) Propulsion system employed in the launching phase of a vehicle flight.
4. Bridgewire - A resistance wire which thermally or explosively initiates the charge in an EED.
5. Charge - A given quantity of explosive.
6. Closed Bomb - A fixed volume chamber used for testing the pressure-time and chemical reaction characteristics of combustible materials.
7. Confined Detonating Fuse (CDF) - A detonating cord with a flexible outer sheath which retains the products of detonation.

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8. Delay - A pyrotechnic device which introduces a controlled time delay between initiation and functioning of an explosive device.
9. Detonating Cord - Flexible tube containing a core of high explosive.
10. Detonator - An explosive train component capable of initiating high order detonation in a subsequent high explosive component.
11. Electro-Explosive Device (EED) - Any cartridge, squib, igniter, detonator, etc., which is initiated electrically.
12. Exploding Bridge Wire (EBW) - A bridge wire designed to be exploded by a high energy electrical discharge.
13. Explosive Train - A series of explosive elements.
14. Functioning Time - In an EED, the lapsed time between application of initiating energy and some later function such as bridge wire break, case opening or start of pressure rise, peak pressure, etc.
15. Fuse - An igniting device used to communicate fire or other initiation stimuli consisting of a flexible tube containing a core of explosive, usually black powder.
16. Fuze - A device designed to initiate a munition.
17. Gas Generator - A device in which a propellant is burned to produce a sustained flow of pressurized gas.
18. Hang Fire - An undesired delay in the functioning of an explosive device after initiating energy is applied.
19. Igniter - An explosive device specifically designed to initiate burning of a fuel mixture or a propellant.
20. Ignition System - The system associated with rocket engines which provides for igniting the propellant.
21. Initiator - The primary stimulus component in all explosive and pyrotechnic devices.
22. Jet Assisted Take-Off (JATO) or Rocket Assisted Take-Off (RATO) - A rocket motor used to assist the take-off of an aircraft.
23. Lead (Pronounced "Leed") - A column of high explosive used as one component of an explosive train.
24. Mild Detonating Fuse (MDF) - A flexible metal tube, usually lead, containing a much smaller core of high explosive than the normal detonating cord.
25. Misfire - Failure of an explosive device to fire after initiating energy is applied.
26. Missile - Any object that is designed to be thrown, dropped, projected or propelled for the purpose of making it strike a target.