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**TESTING OF EXPLOSIVES STABILITY AND REMAINING
SHELF LIFE OF COMPONENTS IN AMMUNITION BEFORE
RECOVERY, MODERNISATION, OR DEMILITARISATION**

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ABSTRACT

Ammunition, rocket motors, explosives, etc., need frequent investigations regarding safety, present status, and remaining shelf life. Before a decision is made and money is spent on, *e.g.*, expensive modernisation projects, it is of vital importance to get information about the safety of handling objects and the expected remaining shelf life of all ageing sensitive materials and components.

This presentation will describe some typical ammunition and missile objects that are exposed to status and shelf life tests and modern test methods. An ageing-sensitive and potentially unstable part in ammunition is the nitrocellulose propellant charge. Pyrotechnical components like igniters and tracers are the most probable life-limiting components. A typical ageing sensitive component in rocket motors is the solid composite propellant made of CTPB or HTPB, with ammonium perchlorate as oxidiser. During ageing mechanical properties will deteriorate and cause unstable burning with possibly hazardous consequences. Many frequently used materials such as plastics, rubbers, adhesives, etc., tend to be very ageing-sensitive when exposed to explosives.