

AWB 00-5 Issue 1 - Depleted uranium in aircraft

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Effectivity

General Information

Purpose

The purpose of this bulletin is to remind all individuals working on aircraft manufactured utilising Depleted Uranium (DU), of the need to follow the aircraft manufacturers and the Occupational Health and Safety recommendations.

Background

This subject was previously covered in Airworthiness Advisory Circular 150-1.

Aircraft manufactures have for some time utilised Depleted Uranium in the manufacture of aircraft i.e. flying control system balance weights. The aircraft manufacturers maintenance manual provides the safety procedures to be followed when working on such systems.

Lift a piece of DU and the most obvious feature is immediately apparent, it is surprisingly heavy. This is why it is often utilised as a counter or balance weight. Balance weights for aircraft control surfaces must fit into limited spaces and although several materials can provide a heavy concentrated mass for installation into a small space, DU is uniquely suited to this purpose.

DU is however, slightly radioactive. To minimise radiation hazards, the DU balance weights are cadmium plated during the manufacturing process. The DU would therefore normally pose no danger, that said, it should still be handled with caution. The primary hazard associated with DU is the harmful effect the material could have should it enter the body. If the particles of the parent metal or its oxides are inhaled or ingested, they can be chemically toxic and cause a significant and long lasting irradiation of internal tissue.

The cadmium plating coating on the DU balance weights not only attenuate radiation emissions but also provide corrosion prevention as unprotected DU corrodes fairly rapidly, producing a black, dusty oxide. During installation, no penetration of the DU balance weights is permitted. The balance weights must not

be sanded, filed, drilled, reamed or reworked in any way. The weights should fit so that they can be simply bolted into place.

Whenever the protective cadmium plating is breached, the weight should be removed from the aircraft or the part may be temporarily repaired by a cleaning/repainting procedure in accordance with the manufacturers maintenance manual.

Recommendations

CASA would remind all individuals to follow the aircraft maintenance manual and all Occupational Health and Safety procedures when working on any aircraft system where DU or any other radioactive material, has been utilised. Disposal of the depleted Uranium balance weights, and any other components containing DU or other radioactive material, may only be undertaken by a state licensed toxic waste recipient.