



SAFETY ALERT

Electrical checks to domestic hot water immersion heaters

Number: SA 07/10

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Who Should Read this: CEstOs, Top Level Budget Holders, MOD Project Managers, SETLs & SEATs, Organisations appointing Authorising Engineers (AE) including: Commanding Officers/Heads of Establishment, Defence Estates (DE) Deputy Heads (Estates), DHE, DTE, DE Intl, DE Advisors and Maintenance Management Organisations.

When it takes effect: Immediately

When it is due to expire: 31 Oct 15

1. Introduction

- a. COMPLIANCE WITH THE CONTENTS OF THIS ALERT WILL ENABLE COMPLIANCE WITH THE HEALTH & SAFETY AT WORK ETC ACT 1974 AND ITS SUBORDINATE REGULATIONS.
- b. The appropriate MOD officer shall arrange for the RPC/ Maintenance Management Organisation (MMO) contractor to carry out all actions in accordance with this Alert.
- c. Any work required as a result of this Safety Alert must be carried out in accordance with JSP 375 Volume 3 – MOD’s Safety Rules & Procedures
- d. On MOD Establishments occupied by United States Visiting Forces (USVF) responsibility is jointly held by USVF and DE (USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Alert. Where this Alert contains procedures which differ significantly from USVF practice DE (USF) code of practice will be issued.

2. Requirement

Establishments intending to use electrical immersion heaters as the primary means of generating domestic hot water, either permanently, or on an interim basis, are to carry out checks to the control circuit of the immersion heater. This is to determine whether there is already fitted, or needs to be fitted, a means of high temperature cut-out. Where a cut-out is not incorporated and the system is unvented, fitment should be considered according to the risk presented.

3. Background

This alert follows an event whereby the immersion heater's own internal thermal cut-out failed to operate, causing the cylinder to become over heated and pressurised. On investigation it was found that there was no safety device fitted to cut off the electrical supply to the immersion heater in the event of either over-temperature or over pressurisation. The pressure switch and high temperature thermostat fitted to the calorifier only operated/activated the high limit actuator fitted on the primary coil. Neither the pressure switch nor the thermostat was connected to the immersion heater circuit.

4. Reference:

Incorporation of electrical immersion heaters fitted to hot water storage vessels in accordance with DE Specification 036.

HSE Guidance Alert (scalding risk from domestic hot water systems) gives additional information and refers to BS EN 60335-2-73:2003 (particular requirements for fixed immersion heaters. It is available on this link: <http://www.hse.gov.uk/services/localgovernment/hotwatersystems.htm>