

SCOSS – Standing Committee on Structural Safety

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LIQUID METAL ASSISTED CRACKING: UPDATE NOTE

This note is an update of the Topic Paper placed on the SCOSS website in June 2004.

Update

New galvanised structures

When designing, specifying or fabricating galvanised steel, structural engineers should take heed of the advice given in the following document:

Galvanising Structural Steelwork

An approach to the management of Liquid Metal Assisted Cracking

Publication No 40/05, by the British Constructional Steelwork Association (BCSA) and the Galvanisers' Association (GA)

SCOSS feels it necessary to draw attention to this document, as, in spite of its availability and the SCOSS Topic Paper issued in June 2004, there is evidence that the potential for Liquid Metal Assisted Cracking is not widely known. LMAC may be rare, but this makes it all the more important that the knowledge captured in this guidance document is read by those who specify or work with galvanised steel.

Existing galvanised structures

The above document refers to new structures. Guidance on existing structures is needed, and SCOSS understands that BCSA and GA have this in hand. The likelihood and consequence of LMAC being present in an existing structure could be assessed by considering indicators such as the nature of the construction, age, and dead to live load ratio. A risk-based approach, combining likelihood with possible consequences, could be adopted to determine further action, including inspection and repair. In this manner only specifically identified structures would generally need a review.

Feedback: new and existing structures

If you have encountered LMAC you are invited to submit your evidence confidentially to CROSS (the Confidential Reporting on Structural Safety scheme) www.scoss.org.uk/cross, which is designed for this specific purpose i.e. to allow reporting of incidents in the knowledge that confidentiality will be ensured. Your report is vital to assist in establishing the technical details and frequency of occurrence of LMAC, which in turn will improve knowledge and awareness in the industry.

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