Slip factors for alkali-zinc silicate paint

AD 429: Slip factors for alkali-zinc silicate paint

This AD note draws attention to the slip factors for alkali-zinc silicate painted faying surfaces considered in AD 383 which have been updated in the 2018 revision of BS EN 1090-2.

AD 383, which was published in September 2014, discussed the slip factor for surfaces coated with alkali-zinc silicate paint and the significant influence of the coating thickness. The AD referred to forthcoming changes to Table 18 of BS EN 1090-2, expected to reflect concerns about the relationship between the coating thickness and slip factor. In the interim, AD 383 proposed slip factors of 0.3 (if certain recommended practices were followed) or 0.2 as a conservative value.

BS EN 1090-2 was revised in 2018 and slip factors are presented in Table 17. For surfaces coated with alkali-zinc silicate paint, the nominal thickness is now specified as 60 μm, with a dry film thickness between 40 μm and 80 μm.

If the applied coating meets the thickness limits specified in Table 17, a slip factor of 0.4 may be assumed. AD 383 noted that in practice the coating thickness can often exceed 80 μm, so coating procedures will need to be carefully controlled and the dry film thickness measured, to ensure the limits in Table 17 are satisfied. If such control is not practical, then the conservative slip factors quoted in AD 383 may be adopted.

References

1. BS EN 1993-1-1+A1; Eurocode 3 - Design of steel structures - Part 1-1: General rules and rules for buildings; BSI; 2014;
2. An approximate method for calculating the elastic critical load of multi-storey frames; M. R. Horn; The Structural Engineer, 53, 1975;