Earth Building Standards

Germany - DIN norms for earth building materials

West Germany was one of the first countries in the world to draw up standards for earthen construction. Documents covering earthen construction, including rammed earth, were published between 1947 and 1956 (Houben & Guillaud, 1994). However, these standards were withdrawn in 1970.

The Lehmbau Regeln was published in 1999. Though lacking the status of a national DIN standard the Lehmbau Regeln provide a national reference document that has subsequently been referenced in the building control regulations of some regional governments. Chapter one sets out the general requirements of earthen construction, while chapter two specifies the types of suitable soil for earth construction and the appropriate selection tests. The third chapter concentrates on describing the various earth wall construction methods (including rammed earth, cob and light straw clay) and materials for the specific application, while the next chapter details the design procedures for each of these methods. In addition, details of the design of vaults, non load-bearing walls, ceiling joists and rendering are also provided. Chapter five presents some earth properties such as density, thermal insulation, permeability and sound absorption. Chapter six touches upon contractual issues whilst the last chapter presents a glossary of the terms used either within the document or more broadly in earthen construction.

The following documents are available at: http://www.din.de

DIN 18945 (2013-08)
Earth Blocks - Terms And Definitions, Requirements, Test Methods

DIN 18946 (2013-08)
Earth masonry mortar - Terms and definitions, requirements, test methods

DIN 18947 (2013-08)
Earth plasters - Terms and definitions, requirements, test methods