1. Record Nr. UNISA996205774903316 Autore Maidl Bernhard Titolo Handbook of tunnel engineering . Volume I Structures and methods // Bernhard Maidl, Markus Thewes, Ulrich Maidl Pubbl/distr/stampa Berlin:,: Ernst & Sohn,, [2013] ©2013 **ISBN** 3-433-60351-0 3-433-60349-9 3-433-60350-2 Edizione [First edition.] Descrizione fisica 1 online resource (485 p.) Altri autori (Persone) **ThewesMarkus** MaidlUlrich Disciplina 485 Soggetti **Tunneling** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover; Title Page; Volume I: Structures and Methods; The authors; Foreword to the English edition; Foreword to the 3rd German edition; Foreword to the 2nd German edition; Foreword to the 1st German edition: Contents: 1 Introduction: 1.1 General: 1.2 Historical development; 1.3 Terms and descriptions; 2 Support methods and materials; 2.1 General; 2.2 Action of the support materials; 2.2.1 Stiffness and deformability; 2.2.2 Bond; 2.2.3 Time of installation; 2.3 Timbering; 2.3.1 General; 2.3.2 Frame set timbering; 2.3.3 Trussed timbering; 2.3.4 Shoring and lagging; 2.4 Steel ribs; 2.4.1 General 2.4.2 Profile forms 2.4.3 Examples of typical arch forms for large and small tunnels; 2.4.4 Installation; 2.5 Lattice beam elements; 2.6 Advance support measures; 2.6.1 Steel lagging sheets and plates; 2.6.2 Spiles; 2.6.3 Injection tubes; 2.6.4 Pipe screens, grout screens, jet grout screens; 2.6.5 Ground freezing; 2.7 Rock bolts; 2.7.1 General; 2.7.2 Mode of action; 2.7.3 Anchor length and spacing; 2.7.4 Loadbearing behaviour; 2.7.5 Anchor types; 2.8 Concrete in tunnelling; 2.8.1 General; 2.8.2 Construction variants; 2.8.2.1 Two-layer

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