Record Nr. UNINA9910437926403321 Autore Krishnaraj Vijayan Titolo Drilling of polymer-matrix composites / / Vijayan Krishnaraj, Redouane Zitoune, J. Paulo Davim New York, : Springer, 2013 Pubbl/distr/stampa 3-642-38345-9 **ISBN** Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (vii, 110 pages): illustrations (some color) Collana SpringerBriefs in applied sciences and technology. Manufacturing and surface engineering Altri autori (Persone) ZitouneRedouane DavimJ. Paulo Disciplina 620.118 Soggetti Drilling and boring Composite materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "ISSN: 2191-530X." Nota di bibliografia Includes bibliographic references. Nota di contenuto Introduction -- Drilling of Composites -- Effects of drill points while drilling of composites -- Effects of drill points while drilling at high spindle speed -- Numerical prediction of the critical thrust force causing delamination at hole exit -- Effects of drilling parameters on mechanical strength -- Behavior of composite plates with drilled and molded hole under tensile load. Sommario/riassunto Polymeric composites are recognised as good candidates for structural components due to their inherent properties. However, they present several kinds of damages while creating holes for assembly. Delamination is considered the most serious damage since it reduces service life of the component. Thrust and delamination can be controlled by proper drill point geometry. Drilling at high speed is also a current requirement of the aerospace industry. This book focus on drilling of polymer matrix composites for aerospace and defence applications. The book presents introduction to machining of polymer

composites and discusses drilling as a processing of composites.