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Nota di contenuto	Front Cover; Manufacturing Surface Technology: Surface Integrity & Functional Performance; Copyright Page; Contents; Introduction to Surface Integrity; List of Symbols; Chapter 1. Setting the Scene; 1.1 The surface as a system; 1.2 Motivating forces; 1.3 The manufactured surface; 1.4 Surface aspects in context; 1.5 Problems of scale; 1.6 Surface integrity; 1.7 Machining conditions; 1.8 Further information; 1.9 Details of further publications; Chapter 2. The Manufacturing Process Unit Event; 2.1 Introduction; 2.2 The unit event and typical manufacturing processes 2.3 Unit events and surface topography2.4 Unit events and the sub-surface; 2.5 The unit event classification of manufacturing processes; Chapter 3. Surface Finish Measuring Methods; 3.1 Introduction; 3.2 Typical profilometer instruments; 3.3 The skid; 3.4 The stylus; 3.5 The traverse unit; 3.6 Filters; 3.7 3D profilometry; 3.8 Microscopy techniques; 3.9 A comparison of the techniques; Chapter 4. Surface Finish Characterization; 4.1 Introduction; 4.2 2D roughness parameters; 4.3 3D parameters; 4.4 Variability of roughness parameters; 4.5 Manufacturing processes and surface parameters 4.6 Parameters and functional performanceChapter 5. Sub-surface

	Altered Material Layers; 5.1 Introduction; 5.2 The sub-surface features; 5.3 Altered material zones and the unit event; 5.4 AMZs and processes; 5.5 The influence of AMZs on functional performance; Chapter 6. Standards and Codes of Practice; 6.1 Introduction; 6.2 Standards defining 2D and 3D surface parameters; 6.3 Standards related to 2D parameter evaluation; 6.4 Standards related to unit events, imperfections and defects; 6.5 Surface integrity technical publications 6.6 A comparison of the various standards and codes of practiceAppendix: Typical Surface Integrity Questions; Background and Rationale of the Series; Index
Sommario/riassunto	The first title in the ""Manufacturing Engineering Modular"" series, the publication of this book marks recognition of the effect of surface finish obtained in manufacture (""surface integrity"") on the functional performance of product, in terms of such factors as fatigue, corrosion and strength. It is a concise work, intended chiefly for undergraduate and postgraduate students, which should also provide useful material for the professional manufacturing engineer.