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Nota di contenuto	POWER SYSTEM HARMONICS; Contents; Preface; 1 Subject Definition and Objectives; 1.1 Introduction; 1.2 The Mechanism of Harmonic Generation; 1.3 Definitions and Standards; 1.3.1 Factors Influencing the Development of Standards; 1.3.2 Existing Harmonic Standards; 1.3.3 General Harmonic Indices; 1.4 Relevance of the Topic; 1.5 References; 2 Harmonic Analysis; 2.1 Introduction; 2.2 Fourier Series and Coefficients; 2.3 Simplifications Resulting from Waveform Symmetry; 2.4 Complex Form of the Fourier Series; 2.5 Convolution of Harmonic Phasors; 2.6 The Fourier Transform; 2.7 Sampled Time Functions 2.8 Discrete Fourier Transform (DFT)2.9 The Nyquist Frequency and Aliasing; 2.10 Fast Fourier Transform (FFT); 2.11 Window Functions; 2.11.1 The Picket Fence; 2.11.2 Spectral Leakage Reduction; 2.11.3 Choice of Window Function; 2.11.4 Main-Lobe Width Reduction; 2.11.5 Application to Inter-Harmonic Analysis; 2.12 Efficiency of FFT Algorithms; 2.12.1 The Radix-2 FFT; 2.12.2 Mixed-Radix FFT; 2.12.3 Real-Valued FFTs; 2.12.4 Partial FFTs; 2.13 Alternative Transforms; 2.13.1 The Wavelet Transform; 2.15 References; 3 Harmonic Sources

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Sommario/riassunto	Harmonic distortion problems include equipment overheating, motor failures, capacitor failure and inaccurate power metering. The topic of power system harmonics was covered for the first time 20 years ago and the first edition has become a standard reference work in this area. Unprecedented developments in power electronic devices and their integration at all levels in the power system require a new look at the causes and effects of these problems, and the state of hardware and software available for harmonic assessment. Following the successful first edition, this second edition of Power