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	Sommario/riassunto	Applying materials science theory and engineering to an important infrastructure use, this book explains the design, analysis, and performance of composite materials in oil, gas, water and wastewater piping. Part one presents critical composites calculations with a special emphasis on failure analysis, dynamic responses due to pulsed and sudden loading, as well as pressure vibration. Part two offers theoretical tools for evaluating the design and lifetime performance of aboveground, underground and underwater FRP piping. The text furnishes design information for pipe and its supports, damage analysis prediction and corrosion, as well as in-service temperature and pressure gradients to carry out loading calculations. Optimization

methods are presented for cost analysis. Pre- and in-service quality control and maintenance are discussed. Book is accompanied by a CD-ROM containing algorithms for pipe design and analysis using Mathematica software, which includes equations for calculating joint design, hanger widths, expansion loops, as well as safe depths for pipes under highways and railroads.--