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design"; "Worked example"; "5 Other structural applications of steel"; "Towers and masts"; "Space frames"; "Cable structures"; "Steel in residential construction"; "Atria"; "SECTION 2: STEEL TECHNOLOGY"; "6 Applied metallurgy of steel"; "Introduction"; "Chemical composition"; "Heat treatment"; "Manufacture and effect on properties"; "Engineering properties and mechanical tests"; "Fabrication effects and service performance"; "Summary"; "7 Fracture and fatigue"; "Fracture"; "Linear elastic fracture mechanics"; "Elastic and plastic fracture mechanics"; "Materials testing for fracture properties"; "Fracture-safe design"; "Fatigue"; "8 Sustainability and steel construction"; "Introduction"; "Economic impacts"; "Social impacts"; "Environmental impacts"; "Embodied energy"; "Operational energy"; "Summary"; "SECTION 3: DESIGN THEORY"; "9 Introduction to manual and computer analysis"; "Introduction"; "Element analysis"; "Line elements"; "13 Local buckling and cross-section classification"; "Introduction"; "Cross-sectional dimensions and momenta and rotation behaviour"; "Effect of momenta and rotation behaviour on approach to design and analysis"; "Classification table"; "Economic factors"; "14 Tension members"; "Introduction"; "Types of tension member"; "Design for axial tension"; "Combined bending and tension"; "Eccentricity of end connections"; "Other considerations"; "Cables"; "Worked examples"; "15 Columns and struts"; "Introduction"; "Common types of member"; "Design considerations"; "Cross-sectional considerations"

Sommario/riassunto

This classic manual on structural steel design provides a major source of reference for structural engineers and fabricators working with the leading construction material. Based fully on the concepts of limit state design, the manual has been revised to take account of the 2000 revisions to BS 5950. It also looks at new developments in structural steel, environmental issues and outlines the main requirements of the Eurocode on structural steel.
