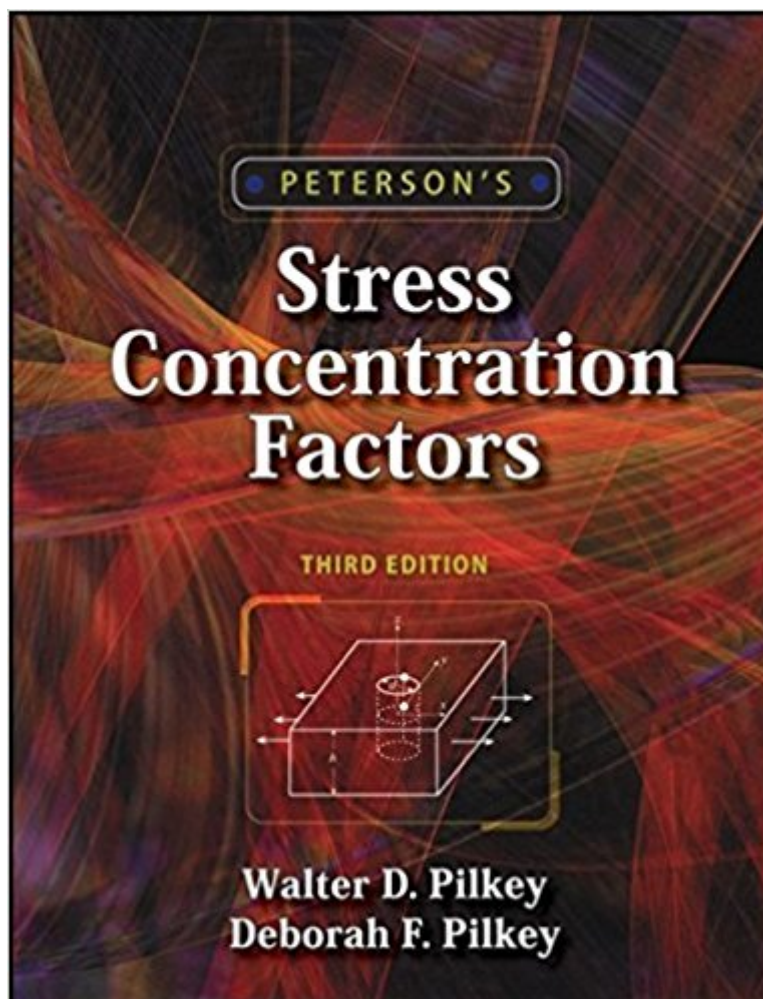


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# Peterson's Stress Concentration Factors



## Synopsis

Peterson's Stress Concentration Factors establishes and maintains a system of data classification for all of the applications of stress and strain analysis and expedites their synthesis into CAD applications. Substantially revised and completely updated, this book presents stress concentration factors both graphically and with formulas. It also employs computer-generated art in its portrayal of the various relationships between the stress factors affecting machines or structures. These charts provide a visual representation of the machine or structure under consideration as well as graphs of the various stress concentration factors at work. They can be easily accessed via an illustrated table of contents that permits identification based on the geometry and loading of the location of a factor. For the new third edition, new material will be added covering finite element analyses of stress concentrations, as well as effective computational design. The book explains how to optimize shape to circumvent stress concentration problems and how to achieve a well-balanced design of structures and machines that will result in reduced costs, lighter products, and improved performance.

## Book Information

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## Customer Reviews

A complete revision of the definitive work on the subject of stress concentration. This new edition updates all of the graphics with computer-generated art which incorporates both a visual representation of the product/structure under consideration along with the graph of the stress concentration factors. Contains extensive material on how to perform computer analyses for stress

concentrations and how to design to reduce them. A "quick-finder" feature has been provided for locating frequently used charts. --This text refers to an out of print or unavailable edition of this title.

The definitive guide to stress concentration, newly revised and updated Stress concentration factors are used in the design of mechanical or engineering structures and machinery and have a tremendous impact on design of virtually every product or structure subject to environmental or use-related stressâ€”from nuclear equipment, deep-sea vehicles, and aircraft to space vehicles, underground tunnels, and turbines. But the sheer volume of stress concentration data is now so large that analysts and designers may have difficulty integrating this information efficiently into design applications. Now in its third edition, Peterson's Stress Concentration Factors establishes and maintains a system of data classification for all of the applications of stress and strain analysis and expedites their synthesis into CAD applications. This new edition of the book has been substantially revised and completely updated and presents stress concentration factors both graphically and with formulas. Structures and shapes of interest can be easily accessed via an illustrated table of contents that permits identification based on the geometry and loading of the location of a factor. This updated Third Edition features: Completely updated and revised coverage of the most recent stress concentration factors, including geometric discontinuities in tubes and countersunk holes in plates The how-to's of optimizing a shape to circumvent stress concentration problems and to achieve a well-balanced design of structures and machines that will result in reduced costs, lighter products, and improved performance New guidelines for the likely stress decay away from the point of the stress concentration for various holes and notches New methods for analyzing and calculating the stress concentration factors based on the length of elements and on the location of loading on components More comprehensive and up-to-date than previous editions, Peterson's Stress Concentration Factors is an essential addition to the professional libraries of engineers and designers working in the automotive, aerospace, and nuclear industries; for civil and mechanical engineers; and for students and researchers in these fields.

Absolutely essential book for anybody interested in stresses in notched bodies; structural analysts who like to use the 'back of the envelope', finite element analysts, fracture mechanicians; designers in aerospace, rail, heavy machinery, light machinery, medical devices, almost anything you can name. Book has been updated from the original; even if you have the original edition, this 2nd edition is well worth having for your engineering reference library.

Good book.

THE book for stress concentrations. Nothing else comes close.

Awesome! I wish I had another one. Very, very nice Good deal! buy this no question they stay in place very well I feel this is an excellent value

How can any engineer live without this book? So often I see failures in forensics due to the oversight of a stress concentration and its effect (residual stresses, strength reduction, stress concentration).

The definitive book of stress concentration factors...updated from Peterson's original edition. This is the ultimate source for aerospace engineers dealing with design and analysis. Other engineering disciplines should find it equally useful. The book is more compact, yet thicker than the original but the the figures are very clear and readable. Explanations appear much the same.

This is an excellent book. I found the book to be extremely informative and thoughtfully written. I recommend this book for anyone that is interested in applications of stress and strain analysis.

I have access to Peterson's original book (older than me?) and to the first edition of this one, published in 1974. I recommend buying used copies of the old ones. They contain the same info and are easier to use since the charts are bigger.

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