



# Book Review

**Stress Intensity Factors Handbook**, Vol. 3, edited by Y. Murakami. The society of Materials Science, Japan, and Pergamon Press, Kyoto, Japan, 1992. 1100 pages.

## REVIEWED BY L. M. KEER<sup>1</sup>

This valuable handbook follows the two volumes previously published in 1987. Although the objectives of the present volume are the same as the preceding ones, all solutions are new and a new chapter, Chapter 18, reflects some of the current interest of researchers in the field of composite materials and structures.

The first two volumes were very useful in providing in one location known solutions to important boundary value problems involving cracks. They also provided a useful service in making available solutions that were in the Japanese journals that might not be well-known to western researchers. The 18 handbook chapters are listed below:

- 1 Fracture Mechanics Test Specimens
- 2 Finite Width Plate Containing Two-Dimensional Cracks
- 3 Cracks in a Semi-Infinite Plate

- 4 Cracks in an Infinite Plate
- 5 Cracks at Stress Concentration (Two-Dimensional Problem)
- 6 Cracks in a Circular Plate or in a Cylinder
- 7 Nonlinear Shaped Cracks in an Infinite Plate
- 8 Interface Cracks and Cracks in Inhomogeneous Materials
- 9 Three-Dimensional Surface and Interior Crack
- 10 Mixed Mode and Mode III Cracks
- 11 Thermoelastic Crack Problem
- 12 Cracks Under Contact Stress Field
- 13 Cracks in Welded Joints
- 14 Cracks in Residual Stress Field or Magnetic Field and Cracks in Anisotropic Plate
- 15 Plate Bending Problems
- 16 Cracks in a Shell
- 17 Dynamic Crack Problem
- 18 Stress Singularity for Notch at Bimaterial Interface

It should be noted that the policy of this handbook is to publish only the solutions for which free copyright permission has been granted by the publisher. Thus a few references have not been included because citing fees were required. Journals for which copyright permission was granted were The Japan Society of Mechanical Engineers, Engineering Fracture Mechanics, International Journal of Solids and Structures, and International Journal of Engineering Science.

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