

**Leguillon, Dominique**

**Calcul du taux de restitution de l'énergie au voisinage d'une singularité. (Computation of the energy release rate in the vicinity of a singularity).** (French) [Zbl 0677.73069](#)  
C. R. Acad. Sci., Paris, Sér. II 309, No. 10, 945-950 (1989).

Summary: The change in potential energy, due to the initiation of a micro-crack or a micro-void at a singular point of a structure, is expressed in terms of the exponent and the stress intensity factor of this singularity, using the matched asymptotic expansions method. Some properties of the energy release rate have been derived.

**MSC:**

[74R05](#) Brittle damage

[74G70](#) Stress concentrations, singularities in solid mechanics

Cited in **6** Documents

**Keywords:**

[micro-crack](#); [micro-void](#); [singular point](#); [stress intensity factor](#); [matched asymptotic expansions method](#)