Corrigenda

T. Yokobori, A. T. Yokobori, Jr. and A. Kamei, "Dislocation dynamics theory for fatigue crack growth", International Journal of Fracture, Vol. 11, No. 5, October 1975, pp. 781–788.

Page	Line	Wrong	Corrected
781	from 4 to 8	Abstract Dislocation group dynamics theory is used to deduce a power type expression for fatigue crack growth. In general, the results reflect only a single rate process, and thus one activation energy which is small compared to those in usual rate processes. The frequency dependence for this power function type fatigue crack growth rate was also obtained, and yield reasonable agreement with experimental results from the literature.	Abstract Dislocation group dynamics theory of fatigue crack growth has been presented. The fatigue crack growth rate of the power type is obtained, and, in general, it is apparently expressed in terms of a single rate process. Thus the activation energy is only apparent one and small as compared with those in usual rate process. The frequency dependence of power function type fatigue crack growth rate was obtained. The theoretical results were compared with the experimental data in the literature, and the agreement is good.
781	from 11 to 17	One of the authors has made an initial attempt [1] to treat the subject, but in this first approximation, a crude power type simplification was made in relating the dislocation velocity and applied stress. Furthermore, this first result was later used [2] in relating the distance moved by the lead dislocation and the number of emitted dislocations produced, by assuming an exponential type relation between dislocation velocity and applied stress, which may not be completely reasonable.	One of the authors has made an initial attempt [1] to treat the subject. However, although the first attempt used the power type relation between the dislocation velocity and applied stress, it used the relation between the distance moved by the lead dislocation and the number of emitted dislocations obtained by Rosenfield <i>et al.</i> [2] who assumed the exponential type relation between dislocation velocity and applied stress.
781	29	$f_{\tau} = \tau_{\rho\phi} b_e =$ $\frac{K_1 b}{(8\pi\rho)} \sin \phi \cos(\phi/2) \cos \psi \quad (1)$	$f_{\tau} = \tau_{\rho\phi} b_e =$ $\frac{K_1 b}{(8\pi\rho)^{\frac{1}{2}}} \sin \phi \cos(\phi/2) \cos \psi \quad (1)$
781	38	$\dots + \frac{K_1}{4\mu} \left(\frac{1}{\pi b \xi} \right) = 0 \quad (2)$	$\dots + \frac{K_1}{4\mu} \left(\frac{1}{\pi b \xi^{\frac{1}{2}}} \right) = 0 \quad (2)$

Page	Line	Wrong	Corrected
782	6	$\dots k_1^2 \dots$	$\dots K_1^2 \dots$
782	8	$\dots \xi_2 \sim \frac{2}{3} \dots$	$\dots \xi_0 \sim \frac{2}{3} \dots$
782	12	$\frac{dU_{act}}{d\gamma} = \dots$	$\frac{dU_{act}}{dr} = \dots$
782	36	$\dots dc/dN = U = nb.$	$\dots dc/dN = u = nb.$
783	9	$\tau_a/\mu = \Delta K_I/\epsilon^{\frac{1}{2}}$	(7) $\tau_a = \Delta K_I/\epsilon^{\frac{1}{2}}$ (7)
783	10 to 11	$\dots$ the approximate stress intensity factor $\dots$	$\dots$ the stress intensity factor $\dots$
784	3	τ_{∞}	τ_{00}
784	6	τ_{∞}	τ_{00}
784	10	$dc/dN = B_1 \Delta K_1 \delta.$	(11) $dc/dN = B_1 \Delta K^{\delta}.$ (11)
784	18	$\dots m = H_c/(4kT)$ [8], where $H_c \dots$	$\dots m = H_k/(4kT)$ [8], where $H_k \dots$
784	22	$m+1 \equiv [H_c/4kT] + 1$ (13)	$m+1 \equiv [(H_k/4kT) + 1]$ (13)
784	31	$\dots$ proportional to $\dots$	$\dots$ linear as to $\dots$
786	10	$\dots \Delta K_1 \dots$	$\dots$ the logarithm of $\Delta K_1 \dots$
787	15	$\dots$ or (18) is $\dots$	$\dots$ or (10) is $\dots$
788	16	[6] $\dots J. Appl. Phys.$, 46 (1975).	[6] $\dots J. Appl. Phys.$, 46 (1975) 3720.
Fig. 2. Caption		$\dots$ corresponds to Eqn. (1) $\dots$	$\dots$ corresponds to Eqn. (10) $\dots$
Fig. 3. Caption		$\dots$ corresponds to Eqn. (1) $\dots$	$\dots$ corresponds to Eqn. (10) $\dots$
Fig. 4. Caption		$\dots$ corresponds to Eqn. (1) $\dots$	$\dots$ corresponds to Eqn. (10) $\dots$