عنوان مقاله:

Kinetics of Ceramic Phase Crystallization in a Glass Derived from Wastes of Iron and Steel Industry

محل انتشار:

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خلاصه مقاله:

The objective of the current study is to determine the fatigue limit of a clean and high-performance material named as HSLA-۱۰۰ steel and to compare the obtained fatigue limit with that of theoretically predicted fatigue limit by statistics of extreme value (SEV) method. Also, the size of inclusions located at the site of fatigue crack nucleation on the fracture surface of the fatigue test specimens is compared with the results of extreme value distribution of the inclusions as well as with that of analysis of inclusions found on the polished specimen. The fatigue cracks were initiated from globular inclusions in all fatigue test specimens. Analyzing the fatigue results showed that the SEV method can conservatively predict the planar fatigue limit of HSLA-۱۰۰ steel. Also, the largest inclusion size predicted by (SEV) method was larger than that of what was observed at the fatigue crack initiation site as well as metallographic studies .of polished specimens

کلمات کلیدی:

Steelmaking, Wastes, Glass-Ceramics, Crystallization, Kinetics