The concentration of microdefects near the crack fracture in polymers and composites based on them

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The article continues and develops previous studies [1–3], which described the formation of zones of forced elasticity in front of the crack fracture in amorphous glassy polymers, the kinetics of destruction of weak nodes carrying the molecular skeleton formation and accumulation of local micro-defects, called holes, their elastic interaction. In this paper, it is shown that the interaction of holes leads to the fact that each hole is surrounded by "atmosphere" of smaller holes. It is also shown that the crack front is the source of its own elastic field. It is shown that the holes diffuse toward the front of the crack. Diffusive flux of holes was designed.

Keywords*: microdefects, crack destruction, polymers, composites.*

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