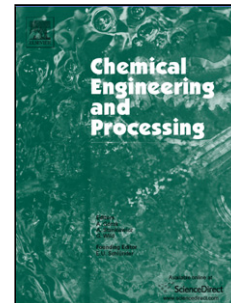


Accepted Manuscript

Title: Solid-liquid mixing performance in a stirred tank with a double punched rigid-flexible impeller coupled with a chaotic motor

Authors: Deyin Gu, Zuohua Liu, Chuanlin Xu, Jun Li, Changyuan Tao, Yundong Wang



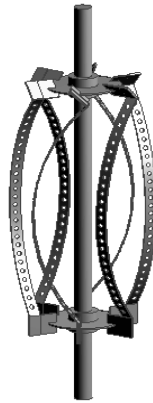
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Graphic Abstract of the Manuscript

The double punched rigid-flexible impeller consists of two rigid impellers and six flexible connection pieces. A certain number of holes exist on the surface of the flexible connection pieces. The flexible connection pieces are under the interaction of agitating shaft and flowing medium, which can cause a series of disturbances on the flowing medium and transfer the impeller energy through the form of wave. With the existence of apertures, a series of high-speed jet flows and a plurality of vortices can be generated in the flow field. These conditions are beneficial to improve the mixing performance in the solid-liquid mixing process.

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