



Harmonic analysis and dynamical response optimization in ceramic tile finishing

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Journal of the Serbian Society for Computational Mechanics / Vol. 11 / No.1, 2018

This paper investigates the dynamic response of a large production machine, used in surface finishing by tool machining in the case of wide dimension ceramic tiles. In particular, the study aims at improving this phase of the industrial process, relatively mysterious inside the ceramic manufacturing, and the overall quality of the final products. A harmonic analysis has been preferred for this scope with respect to other numerical approaches, while two different basements of cutting machine have been considered as alternative design solutions. The response in frequency and phase has been observed and compared. Stresses and strains have been also considered in comparison. This numerical computation permitted to select a convenient design option for the basement.

