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Movement of the Viscous Elastic Fixed Vertically Located Cylinder in Liquid with the Free Surface Under the Influence of Waves

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Abstract : The problem about the movement of the rigid cylinder keeping the vertical position under the influence of running superficial waves in a liquid is considered. The indignation of a falling wave caused by the presence of the cylinder which moves is thus considered. Special decomposition on a falling harmonious wave is used. The problem dares an operational method. For a finding of the original decision, Considering that the image denominator represents a tabular function, Voltaire's integrated equation of the first sort which dares a numerical method is used. Cylinder movement in the continuous environment under the influence of waves is considered in work. Problems are solved by an operational method, thus originals of required functions are looked for by the numerical definition of poles of combinations of transcendental functions and calculation of not own integrals. Using specificity of a task below, Decisions are under construction the numerical solution of the integrated equation of Volter of the first sort that does not create computing problems of the complex roots of transcendental functions connected with search.

Keywords : rigid cylinder, linear interpolation, fluctuations, Voltaire's integrated equation, harmonious wave
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