

عنوان مقاله:

empirical methods of diagnose of cavitation and impact of vibration caused by cavitation on centrifugal pumps

محل انتشار:

دهمین کنفرانس بین المللی مهندسی مکانیک، مواد و متالورژی (سال: 1402)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Arash NourbakhshSadabad - *Phd Candidate, Department of Mechanical Engineering, Tabriz University, Tabriz, Iran*

Seyyed Amirriza Abdollahi - *Master's student, Department of Mechanical Engineering, Tabriz University, Tabriz, Iran*

Mahdi Nami Khallilehdeh - *Master's student, Department of Mechanical Engineering, Tabriz University, Tabriz, Iran*

Seyyed Faramarz Ranjbar - *Professor, Department of Mechanical Engineering, Tabriz University, Tabriz, Iran*

خلاصه مقاله:

Cavitation is one of the Destructive phenomena which results in degradation of the centrifugal pumps by destructing the surface of the impeller. Cavitation occurs in low pressure regions of the pump; thus eye of the impeller is the most probable region for cavitation to occur. The result of cavitation on the impeller of the centrifugal pumps can be seen as little holes and cavitation always causes vibration and noise. In this paper aspects of cavitation, empirical methods of diagnosis and impacts of cavitation on noise, vibration and hydraulic performance of the pump is considered. Analysis of the impacts of cavitation on the hydraulic performance of the centrifugal pump is achieved by the means of vibration monitoring system. This paper also tries to provide a method for predicting the cavitation phenomenon and .means to stop and prevent its occurrence

کلمات کلیدی:

Centrifugal pump, Hydraulic performance, Cavitation, Eye of the impeller, Empirical methods, Vibration monitoring system

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1689567>

