

## عنوان مقاله:

MODERN TRENDS IN DETECTION OF CAVITATION EROSION IN HYDRO POWER PLANTS

## محل انتشار:

بیستمین کنفرانس بین المللی برق (سال: 1384)

تعداد صفحات اصل مقاله: 9

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## خلاصه مقاله:

Cavitation consists of evaporation and condensation of a liquid. Cavitation normally occurs when liquid at constant temperature is subjected to vapor pressure. In fluid power applications the evaporation pressure is reached when flow velocity is increased sufficiently. The occurrence of cavitation in fluid power is mostly detrimental. One of the devastating consequences of cavitation is the mechanical degradation of a solid material (cavitation erosion). Because cavitation is mostly harmful to the system it is to be avoided as far as possible. When actions for preventing cavitation are considered, it is essential to recognise the existence of cavitation and location of cavitation inception point. Direct detection of cavitation is often impossible due to the complicated constructions of fluid power components. Due to restrictions of direct detection of cavities, various indirect methods can be used. In this paper, cavitation phenomenon is explained and effects of cavitation on the system are dealt with. Cavitation erosion mechanisms are described and parameters affecting the degree of formed cavitation erosion are discussed. Modern methods for cavitation detection are presented.

## کلمات کلیدی:

Fluid power, Cavitation, Cavitation erosion, Detection of cavitation

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