



## Detection of Missing Tooth in Gear Assembly using Acoustic Signal

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | From the ancient days the sound signal are being utilized in conveying/ communicating the feeling of human being, nature and the animals. In the present days the sound/ acoustic signal are advantageously being used to monitor health of machine. In this project we investigated applications of acoustics in diagnosis of missing tooth in meshing gears. An experimental setup will be made to acquire the acoustic signal and the signal will be processed using digital signal processing techniques. Depending on the characteristics of the raw acoustic signal obtained from experiment, conventional filters based on Fourier transform and the newly developed Wavelet transform is applied. The Fourier transform expands the original function (signal) in terms of ortho-normal basis function of sine and cosine waves of infinite duration, however the wavelet transform can do it for finite duration as well. One of the great advantages of the wavelet filtering is that the time information is not lost. The problem undertaken has practical importance in operation, on-line inspection, failure prediction and maintenance of rotating components. | Format: Paperback | Language/Sprache: english | 68 pp.



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