

APPLICATION OF DIGITAL IMAGE CORRELATION FOR CURVE SURFACES: A REVIEW

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ABSTRACT

The basic principal of Digital Image Correlation (DIC) for measuring surface displacement and/or wear considering curve surface such as cam is described in this paper. These components on the surface of an object are easily obtained using this method by recording images of surface before and after deformation and/or wear. It is a non-contact optical measurement system, capable of high resolution surface deformation measurements derived from digital images captured of a surface undergoing a deformation or wear. The methodology presented in this paper uses a high speed camera to capture images of the curve surfaces and curved shape parts such as cam, from which surface deformation and/or wear measurements can be made. Wild use of this method in various fields is expected because the measurement can be performed easily and simply. In many cases residually stresses surface layers that are obtained by surface treatment or coating deposition contains significant stress gradients. These gradients affect the performance of component surfaces under the conditions of contact loading in service, such as impact, scratch and abrasion, wear, erosion, fretting fatigue, etc. The determination of residual stress in the close vicinity of sample surfaces, at the depths ranging from sub-micron to a few microns, is a challenging task that cannot be accomplished routinely using existing techniques, such tasks are easily completed using DIC. Cracks induced by external excitation on a material that has defects may generate the stress concentration phenomenon.

REVIEW ON DESIGN OF MUFFLER

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ABSTRACT

In automobile design of muffler is a challenging task. During the design of muffler it is essential to maintain engine efficiency and damp acoustic sound. IC engine muffler is used to suppress acoustic pulse which is spreading along the exhaust system and reduce back pressure to meet regulation and standard.

Back pressure is major aspect which is affect engine efficiency. In recent competitive world, all to improve focus to improve engine efficiency by reducing weight, backpressure. Traditionally reactive and absorptive muffler is used reactive and absorptive muffler. In reactive muffler suppress a sound but produce back pressure and in absorptive not produce backpressure but suppress sound. Therefore in this paper we are going to develop a muffler for optimum flow which avoid a that problem.



UPD
PRINCIPAL

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