

# TECHNOLOGIES TRANSFERRED FROM ISRO

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## OPTO ELECTRONIC APPARATUS FOR STATIC AND DYNAMIC MEASUREMENT (OEASDM)

(Technology Transferred to M/s Holmarc Slides and Controls Pvt. Ltd.)

It is very important to measure the displacement and slope of aerospace and industrial structural components under static and dynamic environment for different structural applications. The static load case includes - (1). Measurement of displacement and slope on structural components and (2). Measurement of slope for Non Destructive Evaluation (NDE) applications on honeycomb sandwich panels and thin walled propellant tanks. The dynamic load case includes the measurement of natural frequencies and mode shapes on different structural components. ISRO and IIT (Chennai) have jointly carried out studies and developed many versions of "Opto Electronic apparatus for Static and Dynamic Measurements (OEASDM)". The system is a portable apparatus that can be used for high sensitive, whole field, real time and non compact measurements of out of plane displacement and slope. This apparatus consists of a rigid base , optical elements such as mirrors, beam splitters, beam expanders, imaging zoom lens, laser source, CCD camera and PC with an image grabbing card.

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