

Application of 3D Laser Scanning for Deformation Measurement on Industrial Objects

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SUMMARY

Of the many facets of laser scanning application the most prominent and effective one is without a doubt the one for deformation analysis purposes. Laser scanning has provided surveyors a means to conduct comprehensive survey of objects in need of deformation analysis, thus allowing for a throughout inspection and ascertaining of all causes of deformations. In comparison to conventional survey techniques and methods this constitutes a significant progress for all professions included in this field. Not only does it make the analysis process more efficient, accurate and comprehensive but it also makes it more cost effective, as all relevant analytics can be conducted from the same data set, i.e. the point cloud. Practical examples given in this paper further substantiate those claims. These works were preformed in petrol refineries on the request of construction engineers, which, by itself, is the indicator of required accuracies. When the same principles are applied to other high accuracy deformation analysis projects, one can easily ascertain the benefits of using laser scanning technology for the purposes of these types of projects.