



International
Standard

ISO 8203-4

**Fibre-reinforced plastic
composites — Non-destructive
testing —**

**Part 4:
Laser shearography**

*Composites plastiques renforcés de fibres — Contrôle non
destructif —*

Partie 4: Shearographie laser

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Introduction

Laser shearography can be used to detect and measure a wide range of manufacturing and in-service defects in fibre-reinforced plastic (FRP) materials. The technique has the advantages of being fast, non-contact and suitable for inspecting large areas, with portable, real-time, and in-situ measurement capabilities. Laser shearography enables detection of imperfections/discontinuities which are detrimental to the performance or ultimate strength of the material. This document specifies the principal method for laser shearography non-destructive testing (NDT) of FRP composites via monitoring of out-of-plane surface displacement gradients, using coaxial illumination and observation perpendicular to the part surface. Defect detection relies on local influences on the global surface deformation from sub-surface anomalies under the selected loading regime.

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