











preserving the sensor sensitivity that has been reduced due to the presence of some damping layer. The thickness of the steel plate has been reduced as possible to not excessively stiff the measurement system. The upper plastoferrite layer (present in the first configuration with the purpose of sensor protection) was eliminated. The last configuration introduced two permanent and rigid neodymium magnets, placed at the ends of the smart patch, to increase the adhesion strength but keeping the system removable. Further developments will be made with the aim of improving the performance of the smart patch.

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## NOMENCLATURE

$n_{eff}$	Fiber effective refractive, dimensionless
N	Newton, kg.m.s <sup>-2</sup>

## Greek symbols

$\varepsilon$	Axial deformation, dimensionless
$\lambda_B$	Bragg wavelength, g/mm
$\Lambda$	Grating pitch, m