

1.10.33. INTERAIL: DEVELOPMENT OF A NOVEL INTEGRATED INSPECTION SYSTEM FOR THE ACCURATE EVALUATION OF THE STRUCTURAL INTEGRITY OF RAIL TRACKS – IMPLEMENTATION OF THE ACFM RAIL INSPECTION MODULE

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The ever growing need for the society to employ more environmentally friendly transportation policies is expected to further underline the economic and societal role of rail transport in achieving sustainable mobility across Europe in the years to follow. Today, the European rail network is continuously getting busier with trains travelling at higher speeds and carrying more passengers and heavier axle loads than ever before. The combination of these factors has put considerable pressure on the existing infrastructure, leading to increased demands in inspection and maintenance of rail assets. A significant number of infrastructure related accidents in the rail industry is due to rail failure. The continuous increase in train traffic, axle loads and operating speeds means that the catastrophic failure of a rail section may result in very serious derailments, such as the one that took place in Hatfield, UK, in 2000, causing loss of life, injuries, severe disruption in the operation of the network, unnecessary costs, and loss of confidence in rail transport by the general public.

The INTERAIL project is a 5.2 million Euro projects supported by the European Research Agency, involving 13 partners across Europe. The project seeks to minimise the number rail failures by developing and successfully implementing an integrated high-speed system based on modular design for the fast and reliable inspection of rail tracks. The application of the high-speed system will be complemented through the implementation of novel semi-automated testing equipment which will be deployed for the in-situ verification and evaluation of the defects detected during high-speed inspection. This paper summarises the results related to the implementation of the ACFM technology as part of the INTERAIL rail inspection platform.