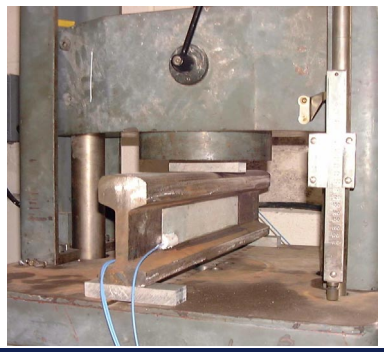
Rail Weigh-in-motion

Project	To develop and trial an OFS system to measure the weight of rolling stock at operating speeds
Client	Weighwell Ltd
Date	1999
Location	Wakefield, England
Sensors	SmartPatch
Attachment	Surface attachment to rail webbing
Interrogator	OFSSSI
Images	 Instrumented rail test section for static loading  Static load testing  Sensor attachment to operating rail  Calibrated load approaching instrumented section for dynamic testing  Calibrated load on instrumented section
Results	SmartPatch sensors were attached to rail sections and calibrated via static loading. Dynamic measurements were taken with a locomotive pulling known loads over an instrumented section of rail at increasing speeds. Results showed that the system responds faithfully to applied load, although the speed and resolution of the then state-of-the-art instrumentation (Smart Fibres' OFSSS I) limited the accuracy of weighing at high speeds. Current day instrumentation, being two orders of magnitude faster and an order of magnitude higher in resolution, makes for a technically viable rail weigh-in-motion solution.
Further information	Please contact us