

An end to 'leaves on the line' may be in sight

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A solution to the perennial rail problem of 'leaves on the line' is one step closer today after successful trials of a new train braking technology. The new Water-Trak system, developed by CoCatalyst Limited, delivered greatly improved train braking on a specially prepared slippery rail. The trials, supported by Porterbrook and the University of Birmingham, used HydroFLEX – the UK's first mainline hydrogen powered train. The testing marked the end of a project funded by the Department for Transport through Innovate UK.

Leaves on the line is a long standing and serious issue for performance and reliability across the railway. The annual autumn layer of leaf matter which forms on the rails creates the equivalent of black ice for trains. The CoCatalyst team discovered that leaf coated rails only become slippery if damp noting that trains still stop safely in heavy rain. Water-Trak simply creates rainy-day conditions on the rail surface by spraying a small amount of water from the train onto the track when a slippery rail is detected.

During testing Water-Trak was deployed in a train equipped with modern braking systems and led to a significant improvement in braking on slippery rails. In comparison with normal braking, the technology reduced stopping distance by more than 20% and significantly cut the risk of wheel damage. In fact, several braking runs without Water-Trak had to be interrupted to protect the train wheels, whereas all tests with Water-Trak resulted in safe and controlled braking.

John Cooke of CoCatalyst said: “Adding water made the braking far less damaging and much safer. Without Water-Trak it was hard to stop the train.”

Train driver, Robin Hicks of Rail Operations Group added: “It has definitely proved to me that water does slow trains down and stops them in good distance.”

In the coming months CoCatalyst will demonstrate their innovative technology on a section of mainline track near Wigan, working with partners Porterbrook and Northern Rail. It is expected that this new solution to the problem of leaves on the line could roll out across the UK rail network as soon as the autumn of next year. For more information please visit the Water-Trak website (www.water-trak.com) or contact CoCatalyst at: info@cocatalyst.com

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