SYLWRAP Case Study

Conduit Pipe Carrying Cables Under Train Repair

An aluminium conduit pipe carrying cables beneath a train is repaired after stones and ballast flying up from the railway track bed caused impact damage

Areas of the UK rail network are powered by a third rail system. Trains take electricity from a conductor line (right of image) on the track bed

Cables carrying electricity taken from the third rail are housed in aluminium conduit pipe attached beneath the train. The aluminium becomes damaged when stones fly up from loose sections of track bed ballast

Black-coloured SylWrap HD with inhibitors making the bandage more fire retardant were applied to the conduit pipe, creating an impact resistant shell

Defect

Areas of the UK rail network are powered by a third rail system. Trains take power from a conductor line on the track bed. Electricity then runs through cables in aluminium conduit pipe attached beneath the train.

One rail operator found that when trains were hitting high speeds in sections where the ballast track bed was loose, stones were becoming airborne and damaging the pipe.

Repeated impact over time caused tears in the aluminium, leaving the cables dangerously exposed.

Solution

Because Sylmasta manufacture composite repair wraps on-site in the UK, it was possible to customise **SylWrap HD Pipe Repair Bandage** based on the rail operator's requirements.

Black dye coloured SylWrap to better disguise the repair. Inhibitors were added to make the bandage more fire retardant, complying with regulations governing materials used on the railway.

Rail workers accessed the bottom of the train and applied eight layers of **SylWrap HD Pipe Repair Bandage** across all areas of conduit pipe requiring repair and protection.

Result

SylWrap formed a rock-hard, impact resistant shell around the conduit pipe. When stones now flew from the track bed, they would be repelled by SylWrap rather than impacting and damaging the aluminium.

The repair was completed inside a day and with a huge cost saving compared to replacing the conduit.

Tel: +44 (0)1444 831459 **www.sylwrap.com** **Email: sales@sylmasta.com**

Sylmasta Ltd, Halland House, Dales Yard, Lewes Road, Scaynes Hill, ENGLAND, RH17 7PG