DEKRA Rail brochure

Remaining useful life

DEKRA

Customized maintenance for a longer life

If you can understand the degradation process of an asset, you'll have a good idea of how long it will meet its minimum requirements. And you'll also know when the next maintenance service is required. By understanding the current condition, it's possible to determine the remaining useful life of your asset and perhaps even extend it. Remaining useful life assessment is DEKRA Rail's area of expertise. Today, it is a crucial element of asset management.

When your objective is for your assets to deliver maximum performance at minimum risk and at minimum cost, it's essential for you to gain insight into the degradation behavior of these assets. DEKRA Rail is able to provide such insight. We establish the current condition of your assets and compare this with the „as new" condition, an earlier measurement, the standards or an expert judgment. We identify the risks, indicate when maintenance is required for exactly what parts, and whether it involves all of these components or just a selection.

Deferring maintenance responsibly

It's often possible to extend the useful life and maintenance intervals of your assets by carrying out the right maintenance on the right components at the right times. The results of investigations and calculations made by DEKRA Rail will help you make responsible choices, not only regarding the end of the operational life cycle, but also with respect to interim reconditioning.
In doing so, at all times we closely monitor everything so that performance does not become substandard.

Technical and economic considerations

DEKRA Rail assesses and calculates the technical and safety risks. These are offset against the expectations you have for the performance of the asset and against the costs: do you invest the absolute minimum in maintenance because the asset needs replacing, or is the investment the right one for extending the asset's life cycle?

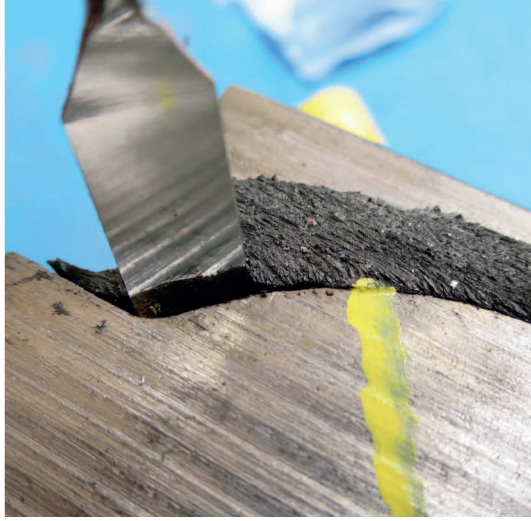
Unknown risk of failure

Sometimes a test or analysis carried out by DEKRA Rail will flag up a new, unknown cause of failure with concomitant risks. In this case we will establish whether the problem is systemic, how often it occurs, what the consequences might be and what sensible maintenance entails. To this end we always answer three questions: Can what happens be predicted? Can it be measured? How often does it need to be measured?

The expertise of DEKRA Rail

DEKRA Rail holds an enormous amount of data on every possible kind of rail asset, backed by expertise built up over a period of 90 years. We know how assets work, how they age and degrade, why and how they fail and what the consequences of this are. DEKRA Rail looks at the whole picture: from certification to damage investigation, from modeling to deferral of maintenance and the extension of the operational life cycle. We have access to all imaginable facilities for measuring and testing your assets, not only in DEKRA Rail's own laboratories, but also as part of DEKRA's worldwide operations.





Practical examples

› Damage to a pantograph. Is the damage caused by improper use? Was there a design fault or a mistake in the specifications? Were usage factors different from those expected? A problem analysis (for example, a KT analysis or Root Cause Analysis) carried out by DEKRA Rail can help answer these questions.

› Excessive wear on the rail in a curve. DEKRA Rail calculates the speed of degradation on the basis of modeling (e.g. using a Multi-Body or FEM analysis). In addition, DEKRA Rail has techniques to monitor degradation. The predictability of the subsequent failures is central in our degradation investigations: Can it be measured? And how (often) should it be measured?

Other services provided by DEKRA Rail

> Railway Certification and Assessment Services
> ERTMS services
> Wheel-Rail optimization
> Product Testing
> NDT services
> Rotating equipment condition monitoring

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