DIRK ZEDLER ON: MARKET SURVEILLANCE PROCEDURES

E-BIKE MAKERS: BE MINDFUL OF LEGAL REQUIREMENTS

Markets for bicycles are growing — drawing greater attention from the various market surveillance authorities. Sales bans are being imposed on manufacturers for a variety of different reasons.

After the tremendous success of the past ten years, we as an industry are entitled to some pride. Electric bicycles were originally seen as mobility aids for pensioners, and criticized for their poor reliability and short useful life. Since then, e-bikes have matured and become a respectable option for all user groups and categories, from the enduringly popular low-entry or unisex bike to cargo bikes and sporty full-suspension enduro models. Industry association Zweirad-Industrie-Verband (ZIV) says that in Germany alone 2.2 million of the bikes sold in 2022 came with electric support. That amounts to almost half of all the bicycles sold that year. The margin is highest in the mountainbike category, where 90 % of all bikes sold have a motor.

So, everything is fine then? Not quite, because a lot of manufacturers are not on top of all the new tasks electrification has wrought. Some deficits are enormous. This can – and often does – lead to sales bans imposed by the authorities and penalties of sometimes tens of thousands of euros.

'e-' turns a bicycle into a machine

Market surveillance authorities cannot and must not be complacent in the face of the success of our industry. The statutory framework throughout the whole European Union clearly states that the authorities must ensure a uniform, continent-wide safety level. Wherever in the EU a product with a mandatory CE marking is sold, the customer must be sure it is safe. No ifs or buts — e-bikes must meet all applicable directives and laws. This is meant to prevent unsafe products from reaching customers, but also to ward off market players trying to gain unfair advantages through lower safety benchmarks for reduced production costs and prices.

Other countries have instituted nearly identical requirements for e-bikes, such as Switzerland, the United Kingdom, Australia and New Zealand.

Such (safety) requirements are by no means unchartered territory. Power tools and household appliances are sectors where transparent conformity procedures and knowledge of the Machinery Directive (one of the applicable legislative acts) have been par for the course for more than 20 years. The cycling industry merely needs to come to terms with the fact that electric motors have changed the legal landscape and that external observers have the right and duty to investigate the manufacturers' safety measures.

For non-electric bicycles, nothing changes. The courts will only take a look when something has gone awry, i.e. in cases of accidents with severe consequences. But with electric bicycles, an authority may request to see and check the documentation if there is even just a 'slight initial suspicion'. Even worse, if the regulations are not met, the authority can and must ban distribution until further notice.

Examples of temporary sales bans

A manufacturer was keen to enter the Italian market. The authorities determined that documents were missing and investigated. Sales were stopped until all investigations were passed and all required technical documents submitted.

A police patrol in Germany stopped a cyclist and noticed irregularities on the identification plate. The bike dealer could produce neither a declaration of conformity nor the technical documents, so the case went to the trade supervisory board at the bike manufacturer's seat.

A shipping container with e-bikes was inspected in Marseille (France). There were no operating manuals in the bike boxes, so officials temporarily blocked the container and the sale of its contents.

The German regulatory authority Bundesnetzagentur banned the sale of cargo bikes in Germany that had not been tested for electromagnetic compatibility (EMC).

A manufacturer in Switzerland received a visit from the Swiss Council for Accident Prevention (BFU). The officials found deficits: incomplete operating manuals and missing risk assessments. The manufacturer could continue delivering the e-bikes only after the new documents were inspected.

For e-MTBs intended for the French market, neither the importer nor the manufacturer from another EU country could provide sufficient test certificates. The authority did not accept the partially incomplete reports provided by the Asian suppliers. Instead, it required tests to be performed in a French laboratory, i.e. in the European Union.

As these examples from our work show, bike manufacturers cannot afford to continue as they have over the past decades. Market surveillance authorities only had big-name manufacturers in their sights at first, but smaller and medium-sized manufacturers are now starting to feel the heat too.

Getting started

The statutory requirements are comprehensive and by far exceed the scope of the Machinery Directive: there is the Low Voltage Directive, the Battery Directive, the RoHS Directive, the many standards for e-bikes themselves and for operating manuals and risk assessments. Sure, it is hardly possible to get on top of all this in an instant. Which is why it is so important for manufacturers to get started across their portfolios. And just as importantly, the whole team, from the management down, needs to be committed.

That training employees is usually a first successful step. The company can turn things around only if all participants are familiar with the safety concepts behind the legislation.

■ **Dirk Zedler**

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Since 1993, Dirk Zedler has been an analyst and expert witness on bicycle accidents and product failures for courts, bike and insurance companies, and private individuals. He got his start in the industry by working for a large bike shop from 1986 on, and now holds the respected advanced engineering degree known as "Diplom-Ingenieur."

Courts have recognized Zedler as an officially appointed and sworn expert on bicycles since 1994, and on electric bicycles since 2014.

The Zedler – Institute for Bicycle Technology and Safety has used this wealth of knowledge, derived from his and his teams work in thousands of court proceedings and expert's reports not only in Germany but from the US to all over Europe, to enhance research and development in the bicycle industry.

The Institute sets the standards for the bicycle industry. It develops and builds testing equipment that is used by manufacturers to improve the riding performance and safety of their bikes, and by leading European bicycle magazines to test them. The Institute's work provides a basis for European and American manufacturers to communicate with their Asian suppliers. Manufacturers can buy test equipment from the Institute or use its state-of-the-art testing labs.

The Zedler Institute also prepares risk analyses, conformity papers, workshops, recall papers und user manuals for bicycles and pedelecs. These manuals, now available in more than 40 languages, help consumers use their bikes properly — and in many cases have protected manufacturers from liability.

Our experts draw on the wealth of experience gained through several thousands of expert's reports to train experts from in and outside the bike industry, such as automotive experts.

What we have learned from court cases, the proceedings of the market surveillance authorities and recalls is the content of our training courses for bicycle manufacturers. As a result, they are in a position to set up CE conformity processes internally.

For more information, visit www.zedler.de.