

Jean Garnero

Tracking down failures

The Court called on Jean Garnero, expert, to determine the causes of failure on a bicycle. Below is an account of the work carried out in cooperation with Cetim, in particular regarding its resources and the expertise of its personnel!



© Cetim

OUR CLIENT

Corporate name

Jean Garnero, mechanical engineering expert with the Court of Appeal of Aix-en-Provence. He has been practicing for more than fifteen years. A mechanical engineer, he worked in industry for a long time before embarking upon his career as a Court-appointed expert

The carbon fork of a racing bike was completely fractured and the cyclist was seriously injured. The initial expert investigation concluded that the fork was fractured further to an impact with a pothole. However, the Gendarmerie's report clearly established that the road was in perfect condition.

The Presiding Judge of the Chamber at the Court of Appeal therefore requested another expert investigation. Jean Garnero, Court-appointed expert, was called on and did everything possible

to find the actual cause of the accident.

The investigation begins

The problem was not a simple one as the manufacturer of the bicycle no longer existed: "We had no document, no drawing, and no information regarding the manufacturing process or the product which could have allowed us to perform analyses from which to draw conclusions", explained Jean Garnero.

Fortunately, the bicycle was kept. Jean Garnero therefore called on Cetim and the bicycle was sent to the laboratories

in Nantes for examinations. The investigation began! A wide range of analyses were carried out: fractographic analysis of the fork; inspection of the manufacturing quality (ultrasonic, differential enthalpic analysis, observation of the micrographic sections, etc.). Mechanical analysis was then carried out in several stages: general measurements performed on the failed fork; determination of the rate of fibres and stacking sequences of the carbon reinforcement; calculation of the equivalent stacking properties; 3D modelling of the fork; sizing study under different loads, etc. The Cetim's report therefore allowed Jean Garnero to confirm that the fork had a hidden defect that was responsible for the fracture. The Court of Appeal concluded that the manufacturer was fully liable.

Cetim's asset

Cetim has numerous efficient testing means. The skills and extensive know-how of its experts help provide



the Courts with thorough elements and conclusions of evidential value.