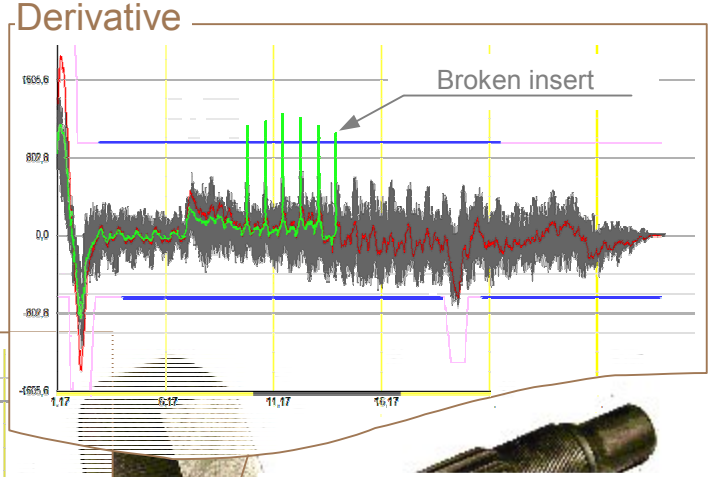
Tool breakage and wear monitoring system – Automotive application

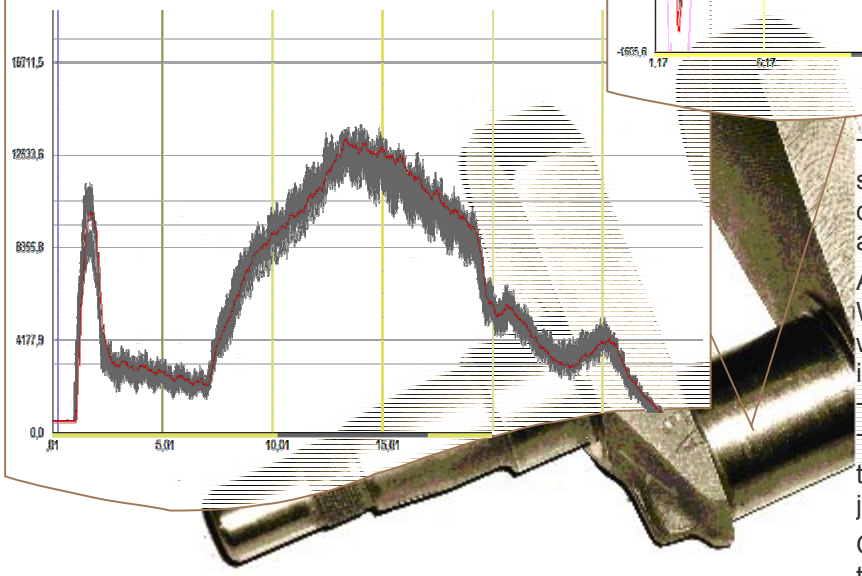
Milling a crankshaft low end

Machining a crankshaft low end on a machine Boehringer, forged steel, with a 700 mm diameter milling cutter equipped with 200 cutting tips.

Derivative



Power



This example of use shows the sensitivity and the reliability of the WattPilote system. An optimal production is assured, because the WattPilote distinguishes between chip accumulation, hardness irregularity of the part and a damaged insert.

As soon as the first cutting tip breaks (detection of 1 insert among 200 !) WattPilote stops the machine : this not only avoids a further production of waste, but also prevents from destructing the tool holder by progressional insert breaking.

The life time of a tools varies according to the hardness of the handled parts. To optimise the tool's life time and to realise cost saving, WattPilote measures the tool wear continuously. The tool is not changed at a given service life, but just when becomes worn.

Over a period of 4 months of industrial operation the cost saving concerning this exploitation (reduction of tool costs, suppression of waste…) increased to 45 000 €.

WattPilote

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