

Boost your machining efficiency with our vibration analysis service

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Do you struggle with excessive tool wear, chatter marks, inconsistent surface finishes or long machining cycles? At Sirris, we help manufacturers overcome these obstacles with our proven vibration analysis service. A scientific approach that replaces trial and error with data-driven precision. This way you avoid delays, waste and high operational costs.

In the world of precision machining, optimizing productivity while maintaining high-quality standards is a constant challenge. Are you struggling with excessive tool wear, chatter marks, inconsistent surface finishes, or extended machining cycles? These issues can lead to costly downtime, reduced efficiency, and increased scrap rates.

At **Sirris**, we specialize in helping manufacturers overcome these obstacles with our **proven Vibration Analysis Service**, a scientific approach that replaces trial and error with data-driven precision.

Challenges: A necessary evil?

Do you often encounter poor surface quality or tool failure due to uncontrolled vibrations? Do you need to regularly replace equipment? Which leads to longer machining cycles and inconsistent part dimensions? You are not alone, many manufacturers encounter these same challenges.

Each problem on its own may seem small, but combined, or over an extended period of time, their impact is very palpable. Scrap, wasted materials and higher operational costs will accumulate. But there is a solution: with our **vibration analyses services** you can overcome all these obstacles. So if you are sick of losing time and money, we have the answer.

How vibration analysis services will help

Don’t worry if you’re unfamiliar with vibration analysis. We will explain the process:

1. **Thorough preparations and assessment:**
   Preparation is the key to success. Before we start testing, we analyse your unique machining environment. This analysis will identify the key problem areas. Based on our findings we can set up our measurement tools and begin testing.
2. **Precise tap tests**
   Tap tests measure the frequency response function (FRF) of a machine, from which we can define the flexibility of your construction. To start we attach an accelerometer to the tip of your milling tool. Next it is manipulated with a hammer.

   This induces vibrations which we measure with the accelerometer. We repeat the process with different amounts of force applied to the milling tool. The relationship between the applied force (input) and the acceleration data (output) gives us the FRF. This way we can evaluate the machine-tool interactions at different spindle speeds.
3. **Data-driven insights**
   We use the data from the tap tests to generate stability lobe diagrams to identify the most efficient cutting conditions. That way we determine chatter-free spindle speeds and depths of cut for your machine.
4. **Actionable recommendations**
   Afterwards we will provide you with tailored solutions to enhance tool life and machining efficiency. We also offer implementation support, so you can enjoy a smooth integration with minimal downtime.
5. **Ongoing support & training**
   Afterwards we don’t just leave you on your own. We also offer training for your team to maintain and further optimize operations.

Why choose Sirris?

Now you know how it works, why choose Sirris? You could have a go at it yourself or find another partner for the job. But the right partner is crucial for machining optimization. If our process hasn’t convinced you yet, we’d love to tell you why other manufacturers trust Sirris:

- **Proven expertise:** Our team brings years of industry experience and uses state-of-the-art technology.
- **Customized approach:** We tailor our solutions to your specific machining challenges. We do not believe in a ‘one size fits all’ solutions.

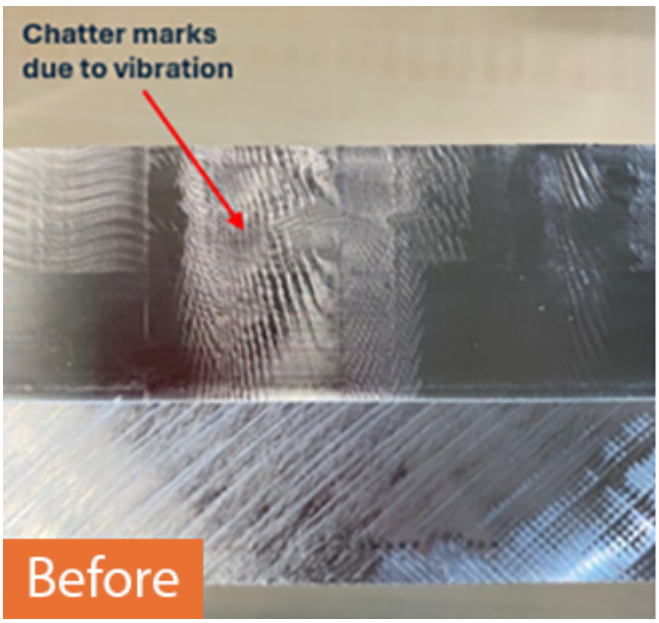
- **Measurable results:** Expect increased tool life, improved part quality, and reduced cycle times. And of course, lower operational costs.
- **End-to-end support:** We guide you through every step, from assessment to implementation and beyond.
- **Vendor independent:** We are not dependent on suppliers. Our advice is independent, with only your best interests at heart.

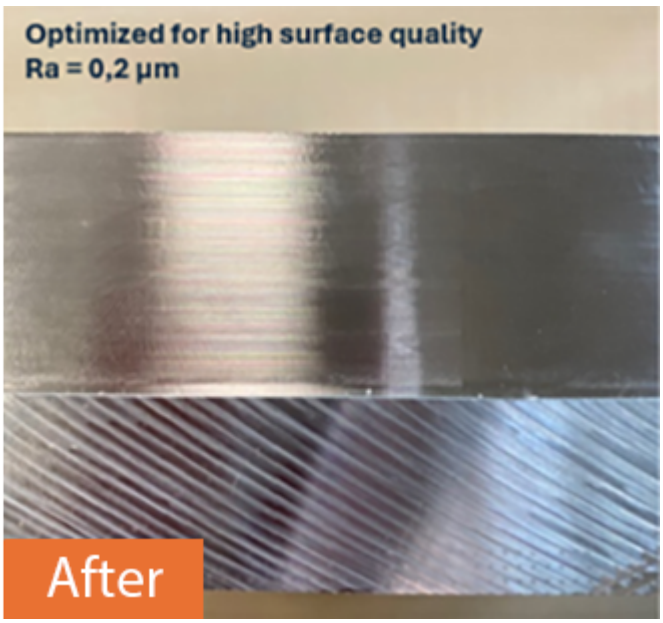
Real results you can expect

You are familiar with our process, the theory behind it and the benefits we offer. But those all lead to one thing: results. Here is what you can achieve with our vibration analysis services:

- Up to **30% reduction** in machining cycle times.
- Significant decrease in **tool wear and replacement costs**.
- Enhanced part quality with improved surface finishes.
- Greater operational efficiency and substantial cost savings and higher productivity.

See the difference in surface quality before and after implementing our vibration analysis techniques in the picture below.





No more bad vibes!

Don't let machining vibrations slow you down. Take control and unlock the full potential of your production processes with our expert vibration analysis services.

Contact us today for a consultation:

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