

Save money by preparing your own samples

A Dutch company has developed an efficient system for sample preparation in the steel industry which requires less material to be sent away for external analysis. This provides major savings in material costs. The system also allows more samples to be tested, resulting in improved production process quality.

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Determining the quality of purchased or produced goods is dependent on how a representative sample is obtained and the preparation of this sample. In-line sampling is crucial to monitor and control the production process. Incorrectly obtained or processed samples will lead to false analyses, resulting in goods being wrongly approved (false positive) or declined (false negative). In the last nine years Laarmann Group BV has specialised in advising, designing and building solutions for the representative sampling and processing of bulk materials.

Cost savings at various levels

The company strongly encourages companies to implement their own sampling process rather than outsourcing it. Outsourcing creates a range of expenses, including the amount of product that is lost during the process.

For instance to ensure that an external laboratory has a representative amount of material for sampling, companies are usually required to send around 25 kilograms of product, even though the actual chemical analysis requires only a few hundred grams. Apart from the question of whether the laboratory produces a representative sub-sample, the left over (rejected) material is never returned. The question is; what happens to this often costly material? Obviously it would be preferable for companies to be able to process and prepare their own sample, particularly when large quantities of precious materials are at stake. With a good sample preparation process, the quantity required for analysis can be reduced to a few hundred

grams. Furthermore, processing the samples in-house make it possible to take multiple samples, thereby more accurately determining the quality of the material. Finally, companies who successfully implement their own sampling system not only reduce their material costs but also transport costs.

The stainless steel industry

Laarmann Group has developed an efficient and reliable system for sample processing of raw materials. In this

specific case we look at the production of stainless steels which requires precise additions of e.g. chrome, nickel, titanium and molybdenum to iron. These high value materials are bought as ferroalloys.

Correct determination of the metal content within these alloys is crucial when producing stainless steel. A shortage of certain elements will lead to an inferior quality of stainless steel, while an excess will only increase the costs of the production.



Companies who successfully implement their own sampling system reduce both material and transport costs.