

## IBE Ingenieurbüro Esper GmbH

Verfahrenstechnik – Kolonnen- & Prozessdiagnostik



## How column diagnostics improve the availability and efficiency of your plants

Part 2: Reduction of costs and scope of shutdown

Plants are subject to regular shutdowns, partly due to regulatory requirements. We will outline some aspects of how you can strategically plan your shutdowns, reduce the scope of shutdowns, or postpone them by implementing suitable measures.

Monitoring fouling-prone plants can allow extended intervals between shutdowns. Regular measurement with our gamma scanning technology allows documentation and evaluation of the degree of fouling. Sometimes, flushing the plant can suffice for a short period of time. Additionally, hot tapping can be an option, as our measurements can determine the exact position of the blockage. Shutdowns can be planned more thoroughly, but, above all, emergency shutdowns can be avoided altogether.

In the chemical industry, there are systems where opening the equipment entails significant effort. Plants where toxic raw materials/products are present require extensive flushing, or if self-igniting substances are present, inertization is necessary. In these cases, our diagnostics can avoid the need to open the system altogether, as the operator receives a factual assessment of the condition of plant components.

In integrated facilities, measuring all equipment can identify weaknesses, allowing the corresponding maintenance to focus on areas of trouble. Checking the mechanical integrity after incidents such as start-up problems, steam hammer, or power outages, can localize the affected areas and help with targeted damage repair.

A column scan can be used to determine how the process is impacted by changes, such as the use of a new catalyst carrier or the purchase of raw materials from another source.

In all cases, our gamma scanning technology enable cost savings which greatly benefit operators.

With a column scan you can:

- · extend the interval between shutdowns,
- reduce the scope of the standstill,
- set the focus on critical components,
- · significantly minimize downtime,
- reduce costs significantly.

With our expertise and many years of experience in troubleshooting distillation units, reactors, and heat exchangers, we are more than happy to assist you in planning your shutdown.

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