

## Best Practice

### Automatic Determination of Target Moisture in Fluid-Bed-Processes

Monitoring the moisture throughout a fluid bed drying process enables the operator to determine the end-point of the drying process precisely without multiple interruptions and without taking several samples to the lab.

A well-known customer who is doing business on a global level calculated that with being able to turn-off the FBD precisely he would save EUR 50,000 per FBD p.a. and earn additional EUR 90,000 per FBD p.a. as he is able to increase capacity by 6% resulting in additional 300 hours of production p.a.

In the new world of continuously production (conti vs. batch) the operation without inline moisture control is not advisable.

### Measurement of Empty Capsules

A global pharma market leader applies TEWS to measure the moisture of empty capsules. The possibility to transfer calibrations from one system to another, the long-term stability of calibrations and the fact that our results are independent from external factors like atmospheric pressure, temperature, light etc. convinced the customer.

For more than 20 years he is using our systems as a worldwide standard with uniform calibrations and systems. Thus, the number of variables which can influence the measurement is reduced to a minimum.

### High-Speed-Dosing With TEWS

We can help you to simplify the dosing of granules or powders significantly compared to conventional dosing applications.

The density measurement functionality allows us to measure not only the moisture but also the mass flow. With valves you can stop a flow of granules or powder after a pre-specified mass has run e.g. into a capsule. This is possible down to as far as 10mg.

This enables you to ensure that each and every capsule is filled correctly and the weight and ingredients meet specifications 100%. Besides that with up to 40,000 measurements per second we are much faster than any mechanical balance.

### Areas of Application

Raw Material

Powders

Gelatin Capsules

Tablets

Oil Filled Capsules

Micro Dosing

## Advantages of Microwave



Moisture and density measurement



Measurement of core and surface moisture



Simple and longterm stable calibration



Independent of dust or dirt



Helps to reduce CO<sub>2</sub> footprint



Short ROI



ATEX protection possible



Industry 4.0 ready



Online-Cloud-Based support



Worldwide Service

For any inquiries please contact:



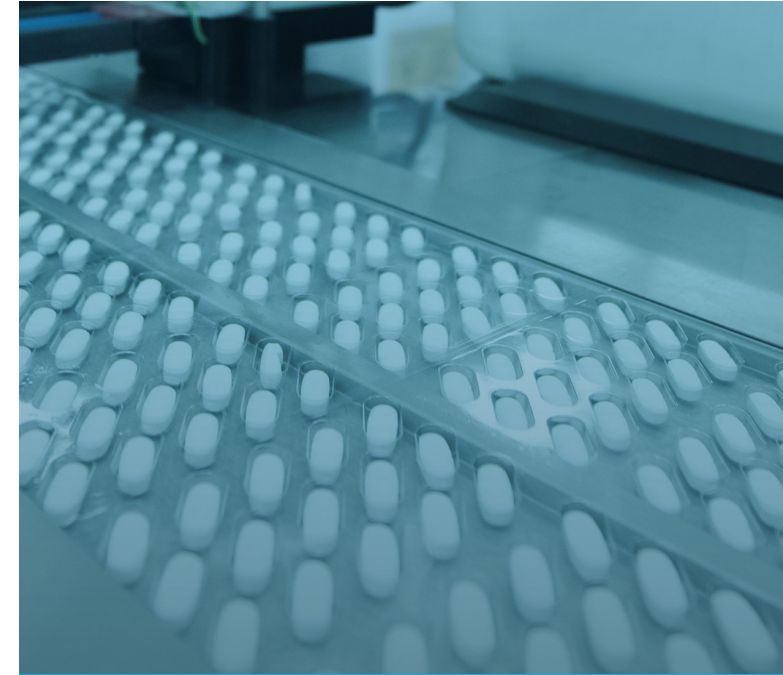
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TEWS  
MEASURABLY BETTER



Pharmaceutical Industry  
As a Partner.

HIGH PERFORMANCE SOLUTIONS



Your production process combined with our patented solutions. The result: the most accurate data about the moisture & density of your products.

## Facts and Figures

Quality



control – of finished tablets and capsules

Process Automation



additional production time per year of FBD

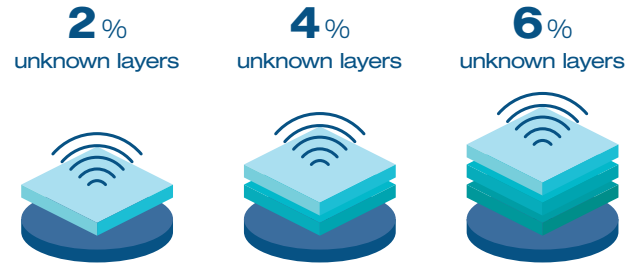
Regulation



ATEX, CFR 21 Part 11, IQ/OQ conformity

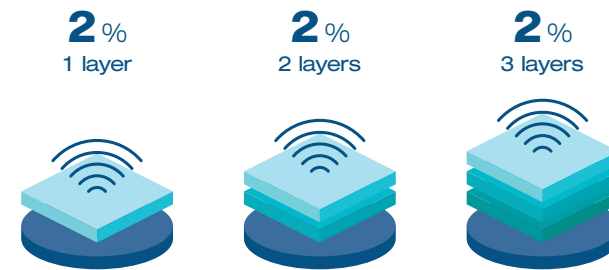
## TEWS Measures Moisture and Density Independently

Traditional 1 - parameter - measurement



3 different layers of the same material with a typical 1 Parameter Method: Each layer increases the moisture → **misleading results**

TEWS - 2 - parameter measurement



3 layers of same material show the same moisture, the density is recognized and moisture result compensated → **correct results**

## About TEWS

TEWS was founded in Hamburg, Germany back in 1970. Today, the company is owned and managed by André Tews in the 2nd generation of leadership. As the market leader in high performance moisture and density measurement solutions, TEWS is at the center of today's business for almost 50 years, now.

TEWS helps you streamline your processes, giving you the ability to collect and use data by applying a unique patented microwave technique across your production business. When you run TEWS high performance solutions, you run measurably better.

Let's look at your production structure together. And in a new, agile way we exchange, attach, discuss, omit or add knowledge. From this we develop new opportunities together. Bringing them into life brings your business forward at the same time. We call this Co-Improving.

