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When extruder performance declines

It's worth taking a closer look at the screw, barrel and grooved bushing!

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Output is decreasing, pressure is fluctuating or product quality is changing? The cause is not always related to the material or process parameters. Gradual wear of the screw, barrel and grooved feed bushing can also affect the performance of an extrusion line. But how can potential wear be identified – and when does a technical inspection make sense?

With a timely inspection, bella Extrudex helps you identify potential causes of wear, maintain process stability and avoid unnecessary costs.

5 signs of potential wear

1 Decreasing Output
The extrusion line no longer achieves its usual output under comparable process conditions.

2 Unstable extrusion pressure
Pressure fluctuates more than usual or can no longer be reliably controlled.

3 Changes in product quality
Dimensions, material flow or surface quality deviate from the usual results.

4 Changes in energy demand
Motor current, torque or energy consumption show noticeable deviations.

5 Unstable process conditions
Established settings for output, screw speed, pressure and temperature no longer produce the same reproducible results.

Typical signs of screw wear

The following examples illustrate different types of wear on extruder screws and their potential effects on the extrusion process.



Worn screw with material residues
Deposits and material residues may indicate changes in process conditions or problems with material flow.



Worn screw with worn flights
Significant wear on the screw flights changes the screw geometry and can affect material conveying and melting.



Worn screw with a worn screw tip
Wear on the screw tip can increase the clearance between the screw and barrel, affecting material backflow.

Don’t just suspect wear. Get it checked!

Whether the screw, barrel or grooved bushing are actually worn cannot be determined from individual process parameters alone. A targeted technical assessment provides insight into the condition of the extruder unit and possible causes of changes in performance.

Not every sign of wear requires replacement. Depending on the condition and process requirements, refurbishment or continued use may also be a viable option.

Our inspection includes for example:

- **Operating data:** Which values have changed compared to previous operating conditions?
- **Screw condition:** Which areas and dimensions show signs of wear?
- **Barrel condition:** What is the actual condition of the inner surface and other relevant areas?
- **Clearances:** What are the clearances between the screw and barrel?
- **Process conditions:** How do the material, fillers, temperature and operating parameters affect the process?

Do you suspect wear on the screw, barrel or grooved bushing of your extrusion line?

bella Extrudex helps you identify the causes and find the most suitable solution from both a technical and economic perspective.

Our new ticket system for support requests

Our new ticket system for support requests is now available – especially for urgent matters such as machine downtime or technical malfunctions.

Your request will be recorded in a structured format and forwarded directly to the appropriate specialist team. This allows us to process requests more quickly, ensure transparent workflows, and reduce response times.



www.support.puetzgroup.de

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