



schwer + kopka

DMI (Die Match Indicator)

Shedding some light on the thread roll die set-up process

Our new **DMI**-technique has been enhanced to show the machine operator in which direction he should move his set-up to obtain perfect die match on his thread rolling machine. Dies can now be aligned faster, more precisely, and with a high degree of repeatability.

Even minor deviations from the optimum die match are clearly highlighted on the **DMI** die-match-indicator readout.

The advantages:

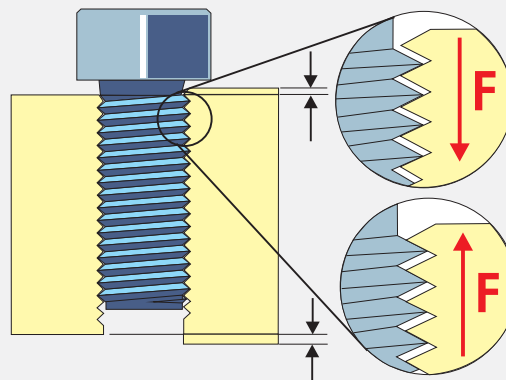
- check die match while the machine is running
- faster set-ups
- more precise and repeatable set-ups
- better thread quality
- increased die life
- less die wear

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DMI (Die Match Indicator) *Die set-up assistance on thread rollers*



Die too high:
force downwards

Die too low:
force upwards

Misaligned dies will cause significant vertical force signals as the die is pushed upwards or downwards. Die misalignment can mostly be allocated to faulty excenter settings on the push rod of the moving ram. When properly aligned, the vertical forces will be small. As a result, thread quality will be good, and die wear will be minimal.

The **DMI** dynamic die match indicator shows the operator in which way the excenter setting should be corrected in order to obtain perfect die alignment.

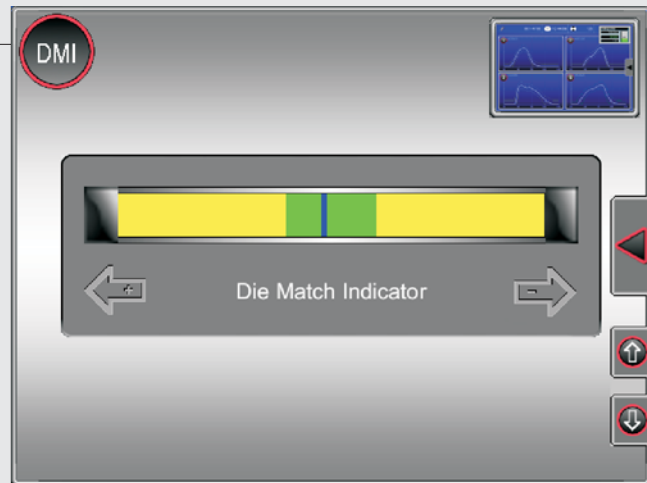
The **DMI** technique reflects the dynamic condition of a running machine while conventional methods typically judge die match by looking at samples taken during jog-mode. Thus, **DMI** is much more accurate and repeatable.

DMI (Die Match Indicator)

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Good die match

When the excenter is in the correct position, the die match indicator locates itself in the green centre zone. Both thread profiles match perfectly and the resulting vertical forces are at a minimum.

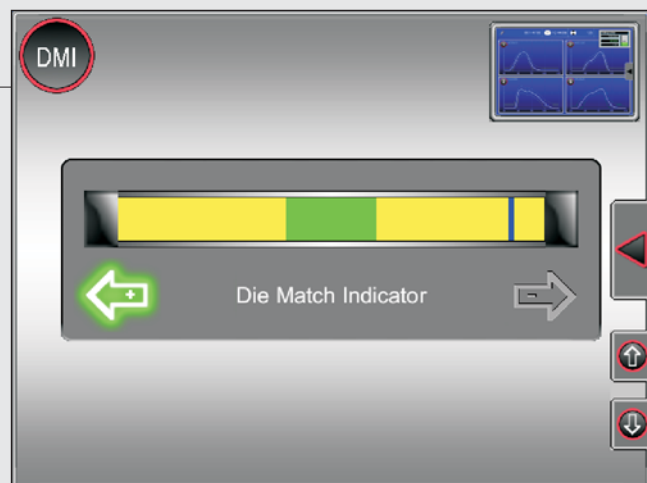


Poor die match (too far negative)

The **DMI** die match indicator is found within the right yellow zone.

The arrow points towards the left and tells the operator to move the excenter more forward (+).

This will position the ram and the moving die more towards the front dead centre.



Poor die match (too far positive)

The **DMI** die match indicator is located within the left yellow zone.

The arrow points towards the right and tells the operator to move the excenter more backwards (-).

This will pull the ram and the moving die more towards the rear dead centre.

