

# Process Monitoring during Piston Rod Cracking

## Example of Use

### Cracking is advancing fast in the Production of Piston Rods!

The piston rod connects the piston with the crank shaft. Normally a split piston rod (main rod and cover) is used. Cracking enables precise and fast production of a piston rod by engraving and breaking the lower connecting rod eye instead of sawing. Our process monitoring system can monitor this process consistently and report every faulty part instantly.

#### Cracking is advancing fast

For some years cracking is also used for the production of piston rods. Therefore the lower connecting rod eye is weakened on a defined place, for instance by a laser. Afterwards the cracking will split the part at the predetermined point. The advantage of this procedure is obvious. The process is much faster and the split parts (piston rod and cover) fit perfectly together.

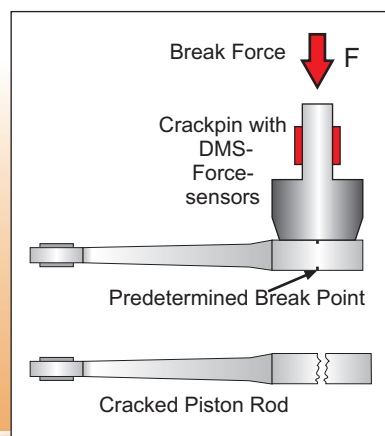
#### Monitoring during Cracking

The cracking process usually runs accurately defined. However various faults can arise during the production process and result in unusable piston rods.

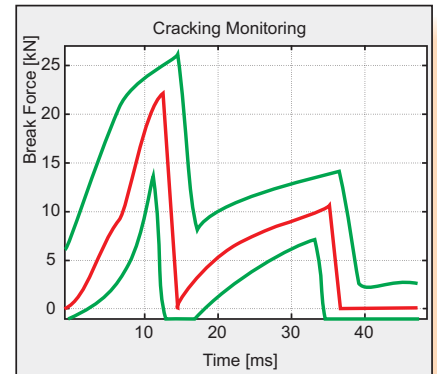
The ToolScope enables a consistent monitoring of the process

- ✦ Monitoring the break force during the cracking of piston rods.

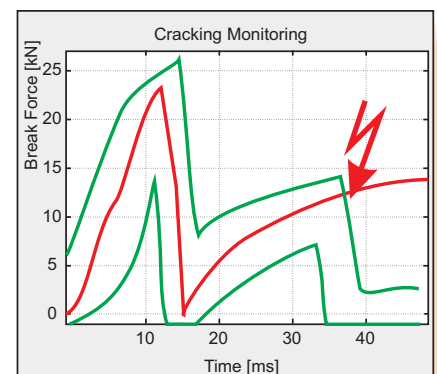
- ✦ Recognising a faulty break: Typically the piston rod breaks on the predetermined breaking points one after the other. Due to missing or faulty cuts the second break does not occur.
- ✦ Draw conclusions as to the quality of the weakening of the previous processes.
- ✦ Monitoring and assuring the quality of the produced piston rods.
- ✦ Scanning with more than 1kHz.



Faultless cracking process



Second break faulty



Engraving too little

