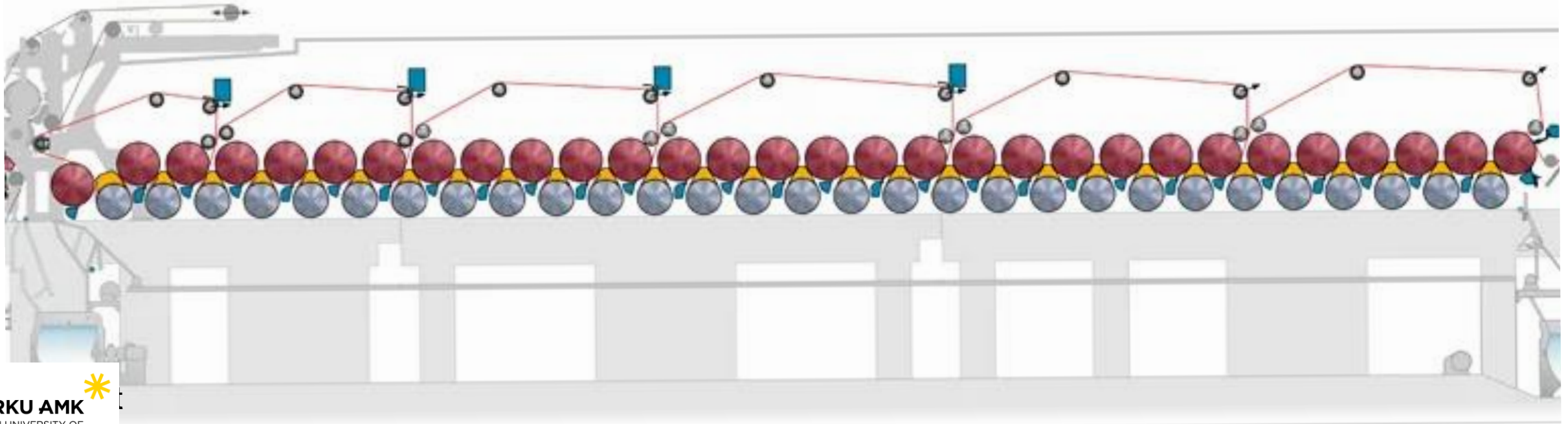


SELF-REGULATING SEALING SOLUTION FOR IMPROVED RUNNABILITY AT HIGH-SPEED PAPER MACHINES

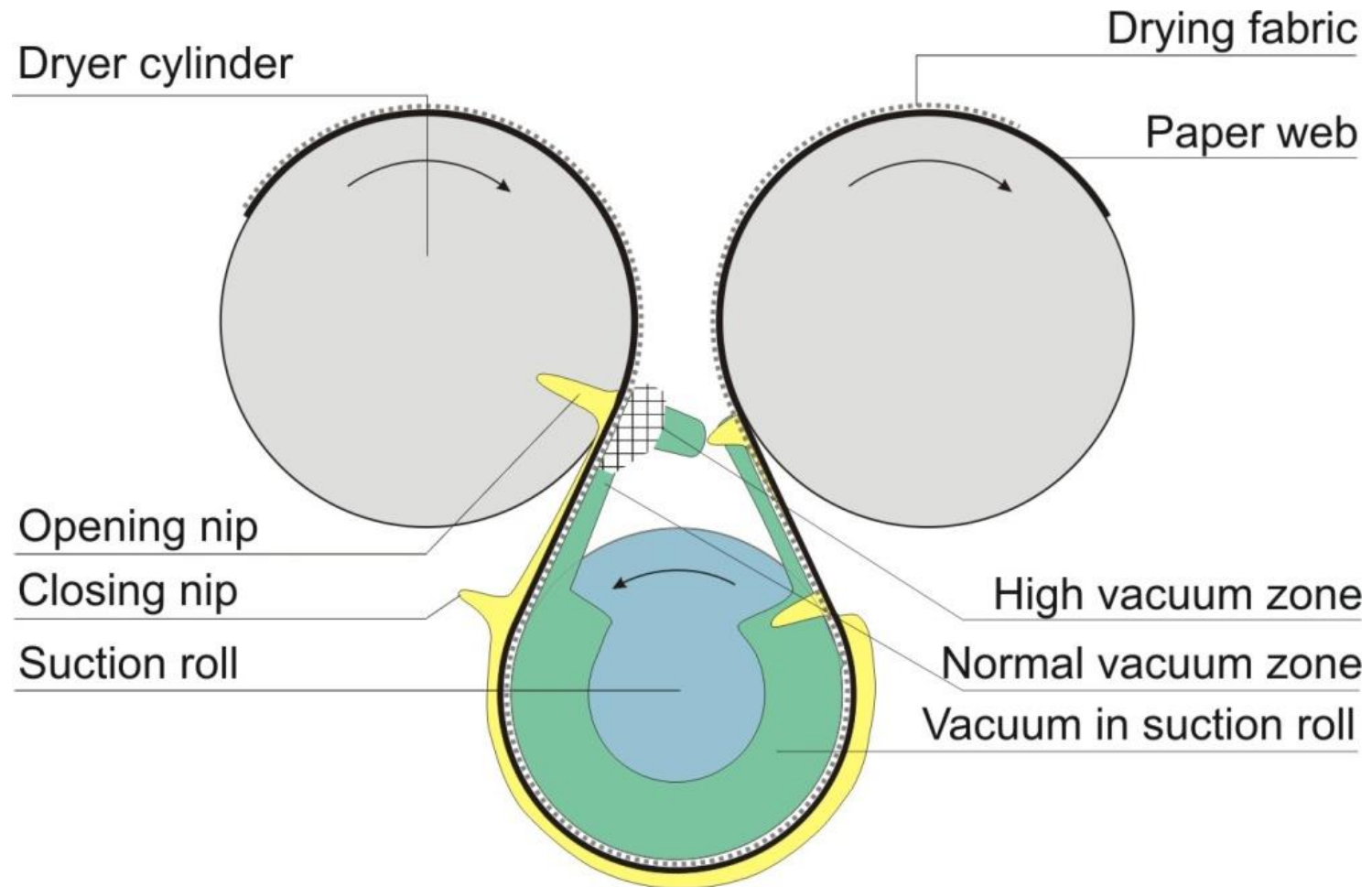
Dr. Juha Leimu
Turku University of Applied sciences

Explaining problems of cylinder dryer runnability systems
and an approach to solve some of those

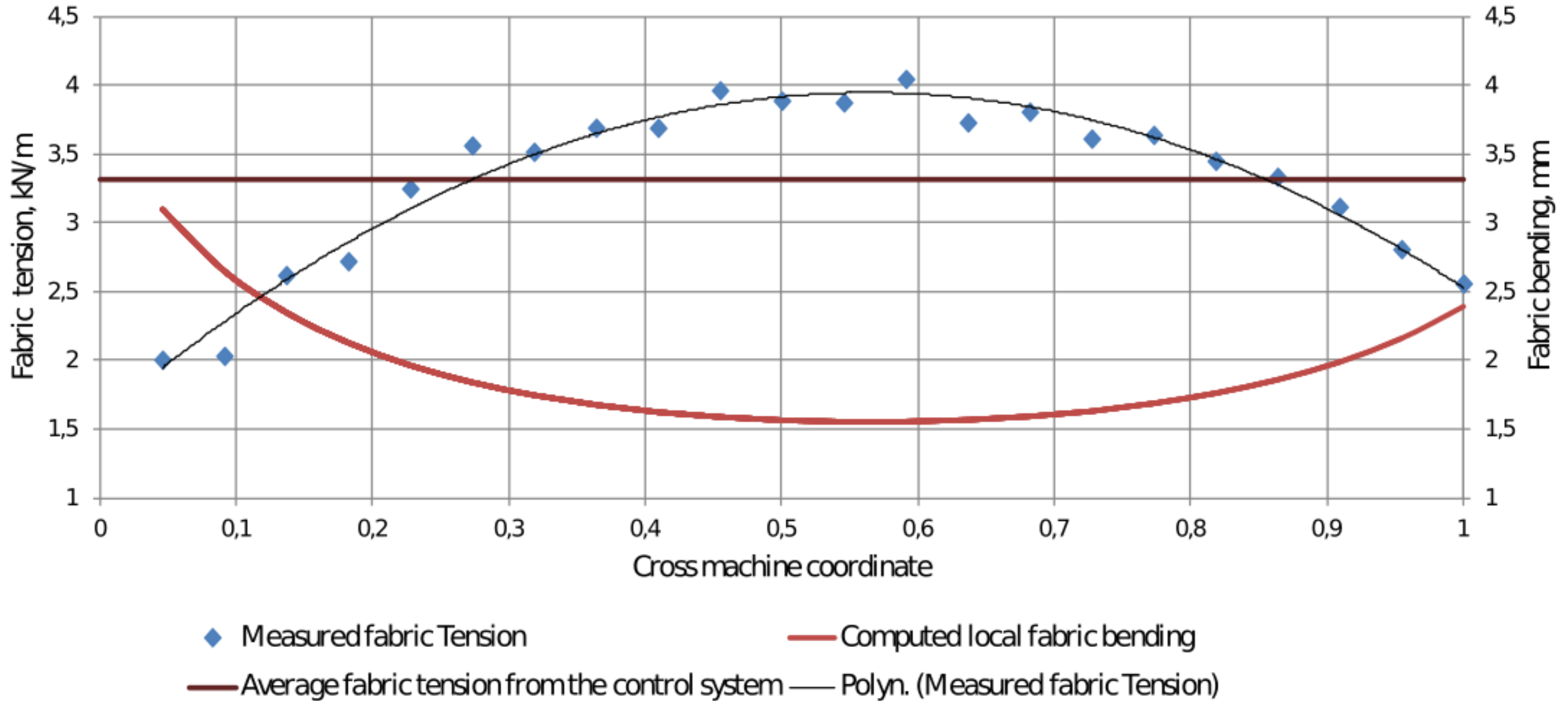
Cylinder dryer



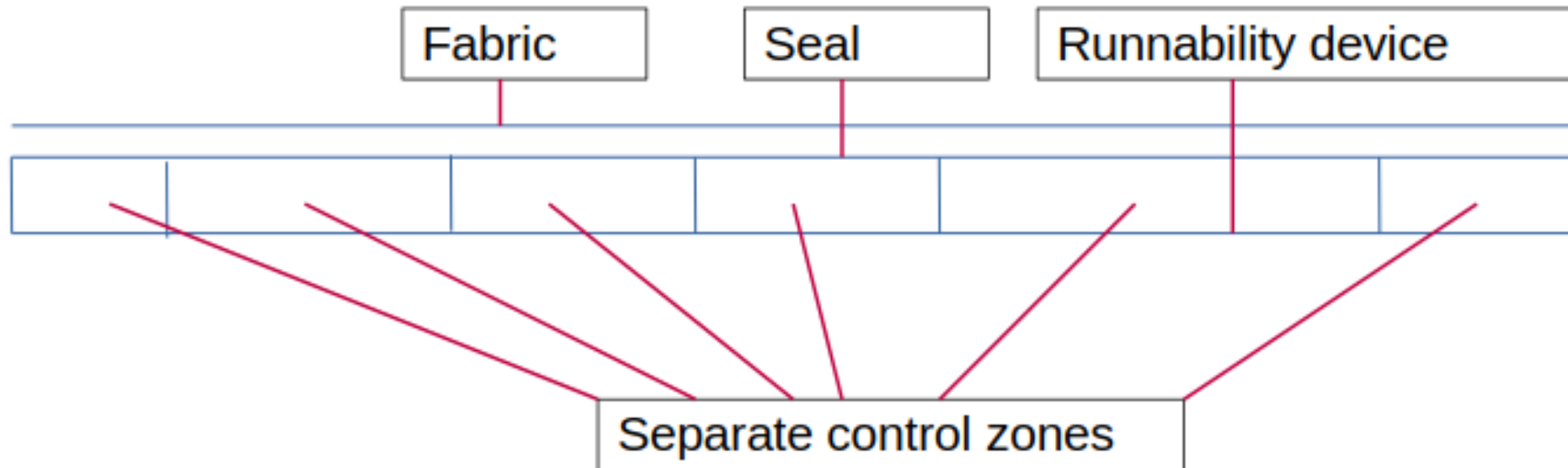
Opening nip



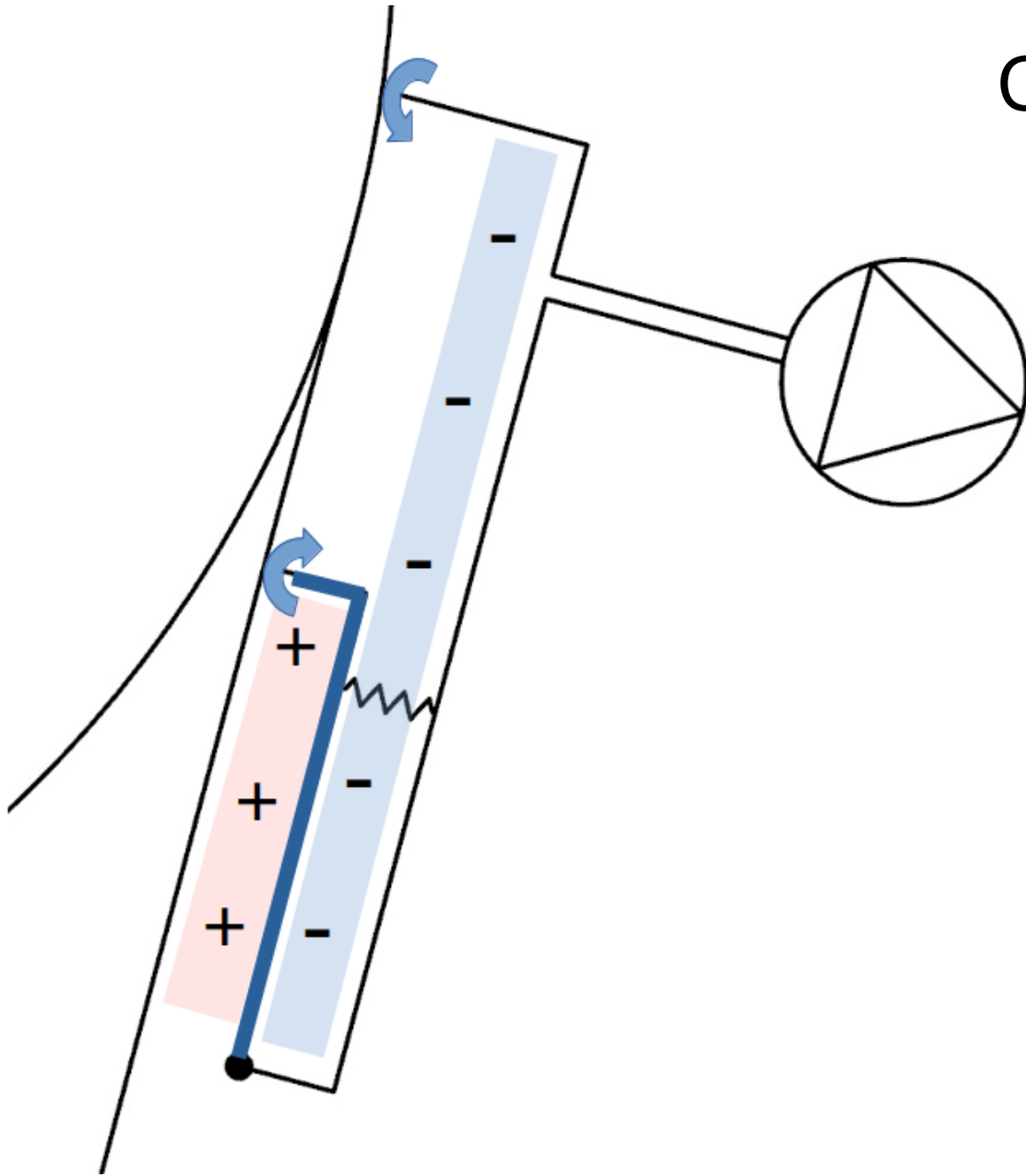
Fabric tension and bending



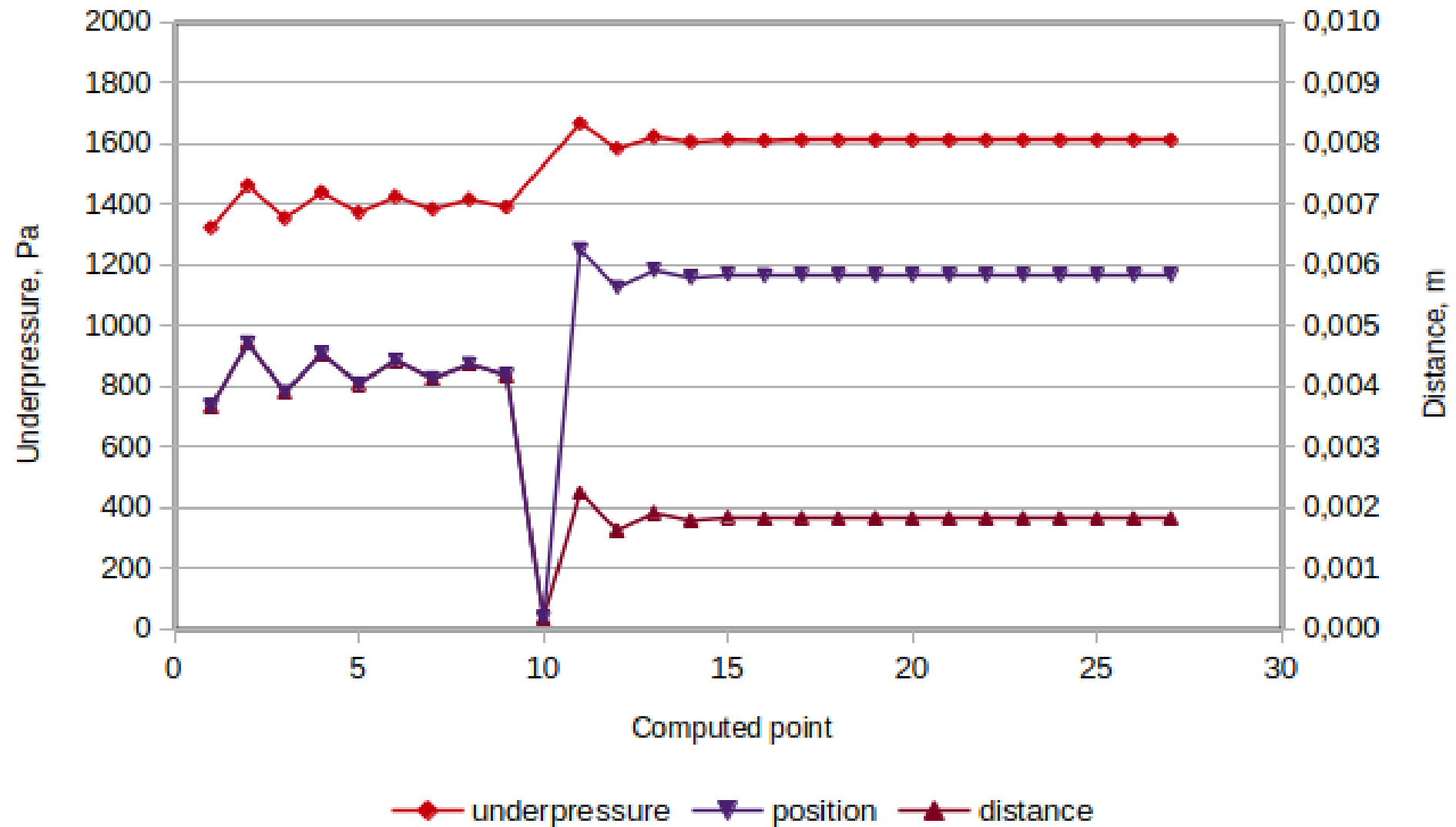
The underpressure zone is divided to individual control sections



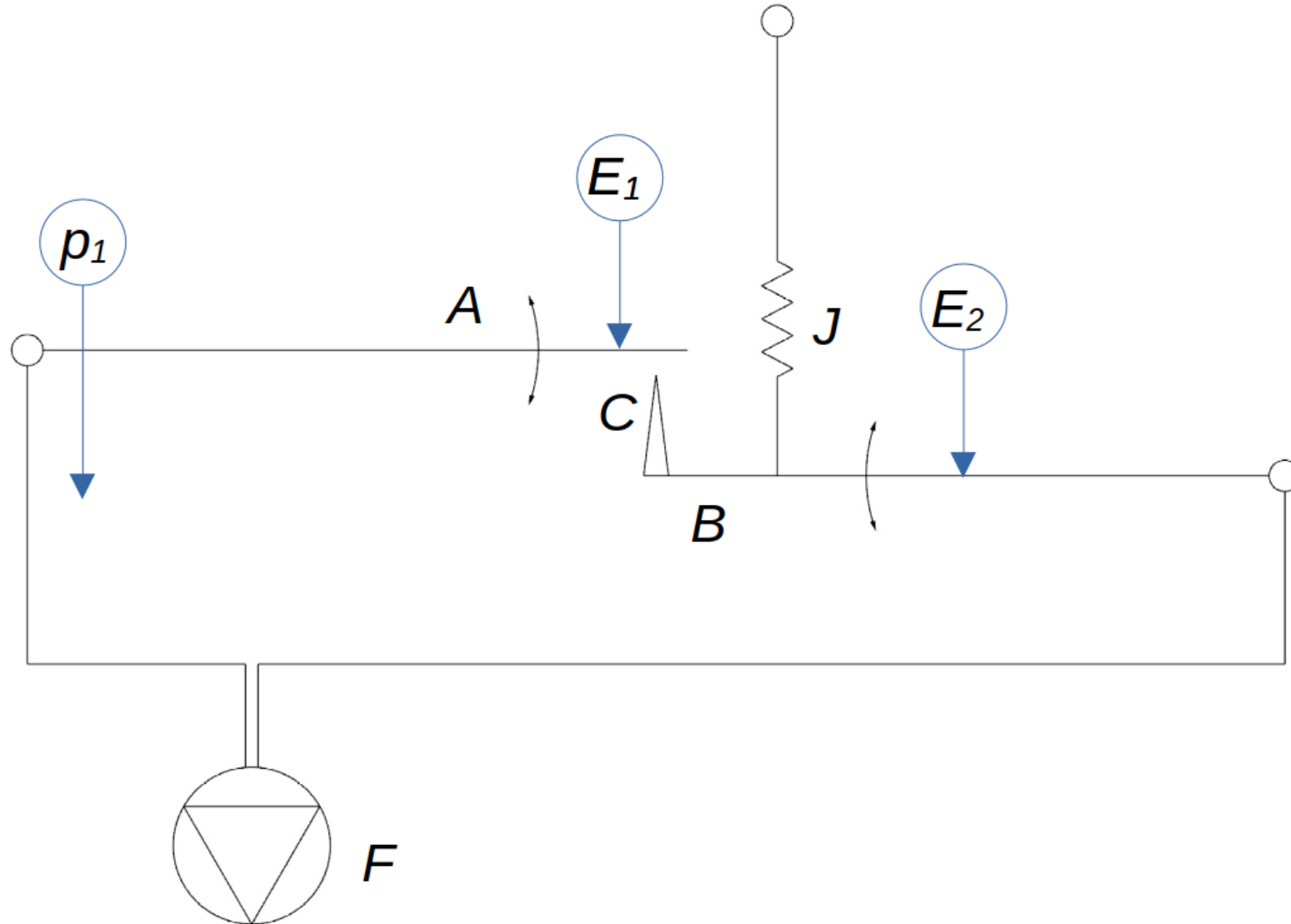
Control function



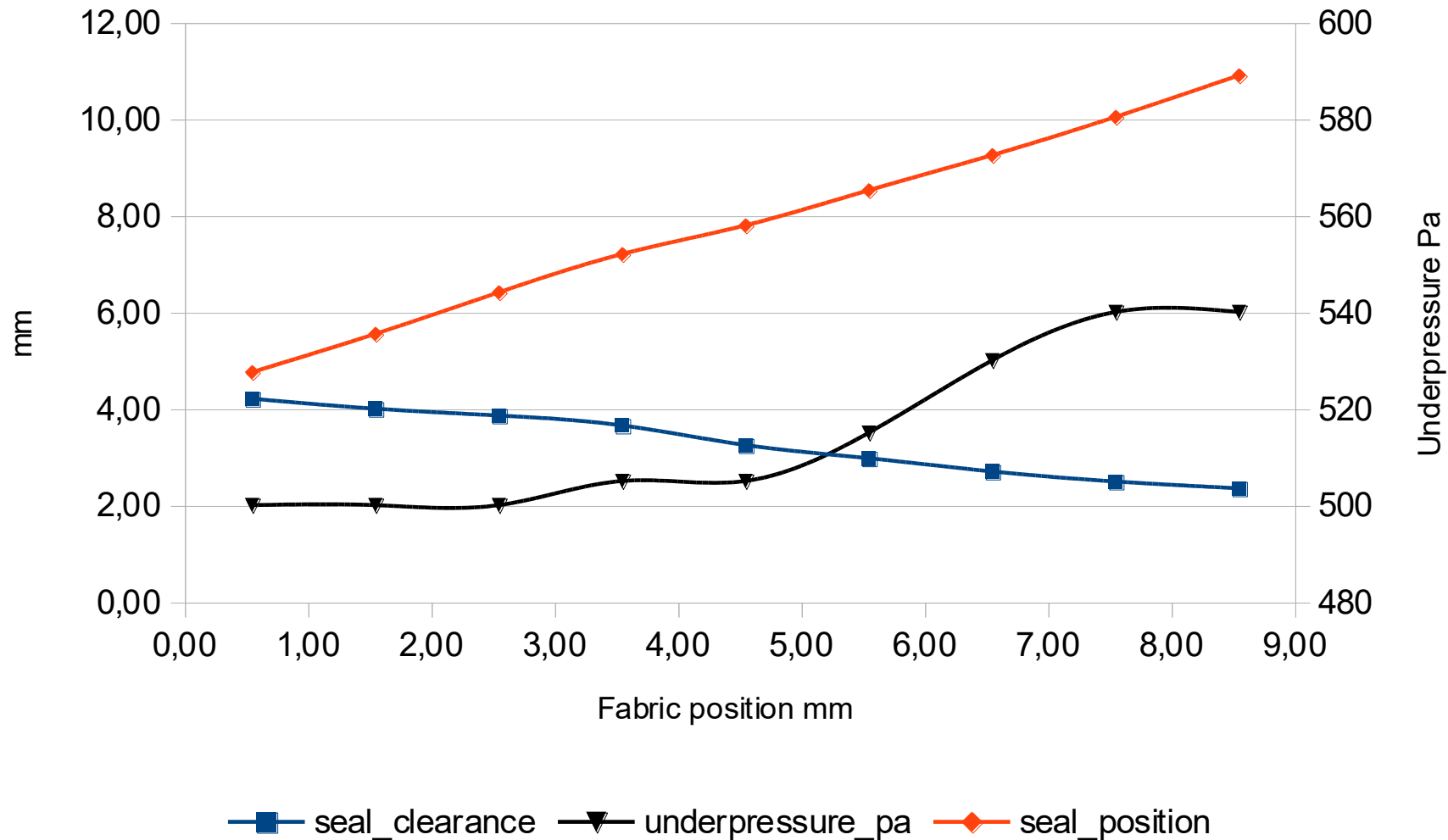
Simplified simulation



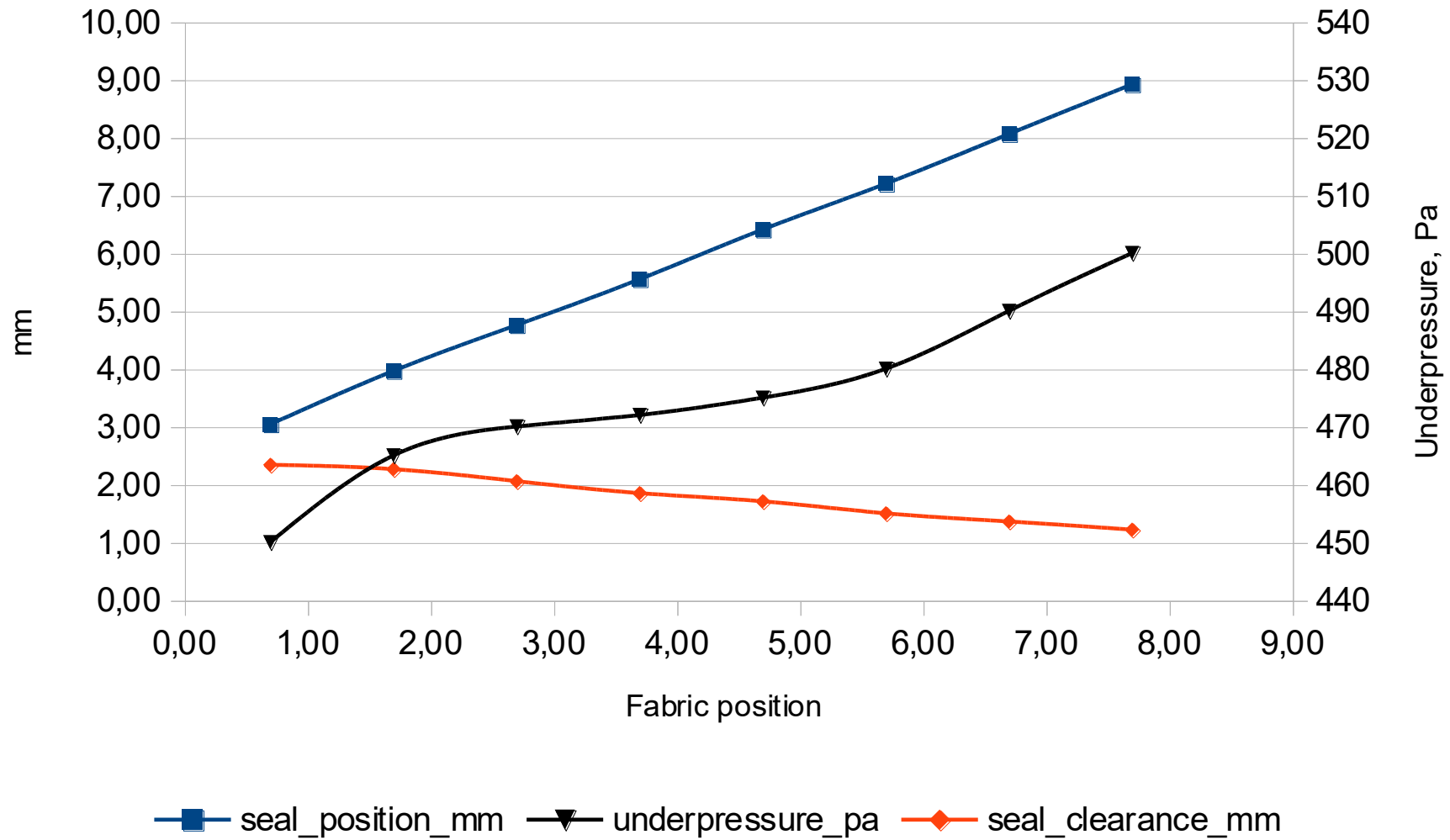
Experiments



Experimental results so that all leakage through the dynamic seal



Experimental results so that upper seal leakage included



Conclusions

- Now commonly used runnability systems were developed long ago for different products and with different priorities
- These systems could be modified to respond the existing problems
- First step would be to divide the cross machine uniform seals to short segments
- Second step could be using the proposed dynamic sealing
- The biggest problems are money and daring
- Enormous cost pressure leads to two kinds of system solutions.
 - Using the same as the last twenty years is safe
 - The cheapest is the best
- Achieving technological advantage requires daring and commitment