

## EDITORIAL

### Trends in 2018

For some time, my younger colleagues keep repeating their questions whether hydraulics is still an area of interest and if so which would be the topics of the future. The answer to the first question is prompt and without much justification, maybe except the one that it is not possible to eliminate a type of drive which along with pneumatic, electric and mechanical drives underlies any kind of transmission or movement in the technics.



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For the second question things get complicated, because there are many possible answers, which differ according to the specialists' interests, their field of activity, the trends in the related fields and, many times, even according to the general directions of development in science, technics, technology and new materials.

However, besides general stuff, which is most often unnecessary, I also have some practical answers. First of all, it should be made clear that most of the trends of the last decades have turned over time into "milestones in the development of the field", which will most likely happen to today's trends, as well.

Current trends fit into several directions, of which the most important ones are related to reducing energy losses, increasing functional performance and reducing production costs by using new technologies and new materials. Specifically, I believe that the following topics will be of great interest in the coming years.

- 1- Reducing energy losses by developing solutions by which the hydraulic energy produced gets very close to the energy consumed in each phase of the operating cycle of a machine.
- 2– Increasing the performance of hydraulic equipment by using new technologies and intelligent materials.
- 3- Developing new types of equipment with new features.
- 4- Discovering working fluids that can be used in systems with high fluctuations in temperature or extreme climatic conditions.
- 5- Embedding hydraulic or pneumatic systems in clean, renewable energy production equipment, both for power functions and for control and automation functions.
- 6- Digitalization of hydraulic systems.
- 7- Switching to series production of digital hydraulic equipment and systems.
- 8- Increasing reliability of hydraulic equipment and systems by careful control of heating, vibration and friction.