Comments on the interim report of the Review Study on Circulators

December 2016

General comment

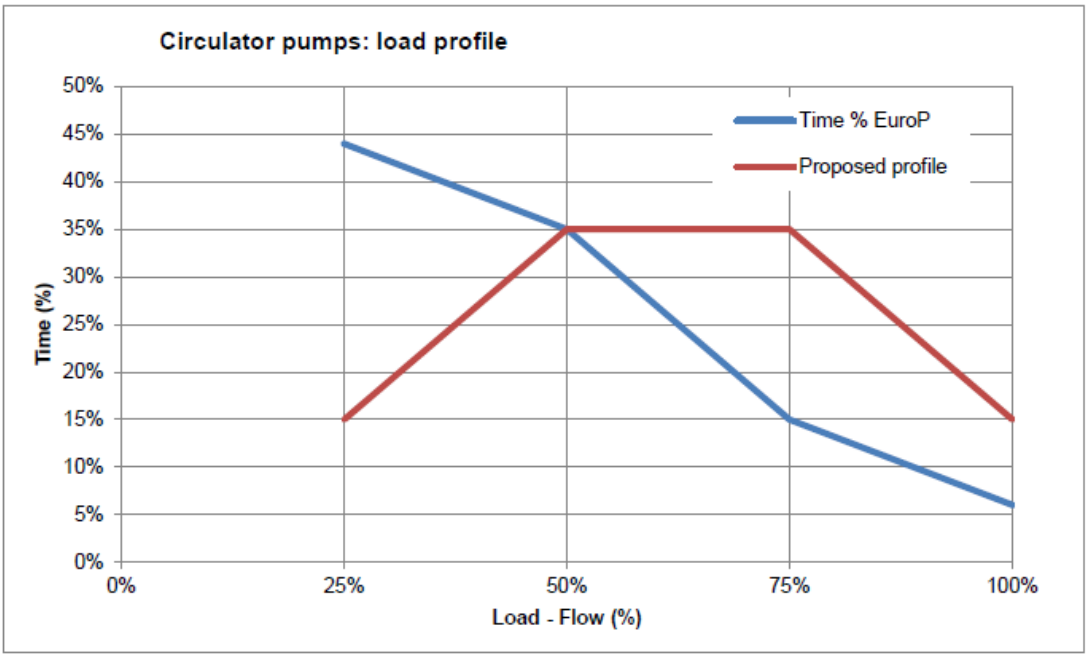
We would like to stress the importance of having another round of stakeholder consultation before the final report is completed and published. The current report is only halfway in the study process, lacking recent market data, actualisation of life cycle-cost calculations and energy saving estimates. It is necessary for stakeholders to be able to review the sources, key findings and conclusions from the study team before publication. If not physical, an online consultation is vital.

Scope

Regarding the 'drinking water loophole', the fact that a few Market Surveillance Authorities (MSAs) have tested circulators and interpreted the loophole in the right way is not sufficient. The coverage of multifunctional circulators deserves to be clarified, through a change in the wording of the exemption for example.

Life-cycle calculations

- If installation costs are the same irrespective of efficiency levels, then they do not impact LCC calculations and are of little importance for the study conclusions. It is unnecessary to suggest precise installation costs, as this could become controversial. Solely mentioning a range would be sufficient for the report.
- The flow-time profile (p. 18) dates from 2003 and is most likely not representative of today's products and the trends towards more appropriate sizes and better installations. There may be more time spent at the 75% flow-rate point. A suggestion for a more realistic profile is provided below:



Improvement potentials

In the Impact Assessment Study accompanying the 2009 Regulation, the following was stated: "*The inquiry shows that not all circulators can reach even the EEI of 0.18 level and lower levels seem not physically possible for most circulators*". In reality, manufacturers have been able to place new models on the market which are below an EEI of 0.17 and can most likely do even better if need be. Great care must be taken when using the *'physical limits'* arguments.

EEI methodology

The study does not review the methodology at all, and particularly the reference line (Annex II, 4 of the Regulation).

4. Calculate the reference power as:

$$P_{ref} = 1{,}7 \cdot P_{hyd} + 17 \cdot (1 - e^{-0{,}3 \cdot P_{hyd}}),\ 1\ W \leq P_{hyd} \leq 2\ 500\ W$$

The formula for the Reference Power calculation is problematic, as it is based on old pump technology. The formula leads to the fact that small pumps and large pumps > 200 W can easily reach EEI<0.2 (down to 0.15), whereas middle-sized pumps have more difficulties reaching EEI of 0.2. Consequently, the methodology leads to efficiency requirements that are stringent for middle-sized circulators, and too weak for small and larger sizes.

This creates a potential bias that could be a barrier to setting new levels of universal efficiency requirements.

Resource efficiency

The section on resource efficiency focuses extensively on end-of-life recovery and treatment, but barely suggests requirements at the design stage of the products. By introducing requirements at the design stage, contributions can be made towards resource efficiency, including, but not limited to:

- Ways to make products lighter and using less critical materials,
- Requirements to ensure the different parts/materials are more easily separable (i.e. not glued but screwed),
- Requirements to facilitate product reparation/upgradability.

We encourage the study team to develop such recommendations based on best practices and benchmarks. As an example, the report mentions that *"more modular designs would be needed to recover more of the electronics"*, but no detailed, practical solution is provided on how this could be enforced in a Regulation.

Other comments

- Figure 1, p. 6: The figures in the table for the typical head (m) are too high. With typical heating systems, 1.5 to 2 m for single family housing, and 3 to 4 m for larger multi-family houses is enough.
- Figure 5 p. 20: the screw is not the speed controller. The speed control is a 3-level button situated at the back of the product.
- P. 33, last line: the problem is not to separate hydraulic components from the pump housing, but rotor and impeller from the shaft and disassemble electronics (as in many industrial electronics).
- The UK should be removed from all modelling and calculations for 2030 as they will leave the EU.

Contact:
ECOS – European Environmental Citizens' Organisation for Standardisation
Chloé Fayole, chloe.fayole@ecostandard.org