NSF Standard(s) Impacted: NSF/ANSI 50

Background:
Provide a brief background statement indicating the cause and nature of concern, the impacts identified relevant to public health, public understanding, etc, and any other reason why the issue should be considered by the Committee. Reference as appropriate any specific section(s) of the standard(s) that are related to the issue.

SECTION 23 Flow Metering Device was added to NSF/ANSI 50 – 2017 to have a positive impact on public health by providing test methods for flow meters. Some pump manufacturers are now incorporating a flow rate display on their pump that infers a flow rate based on impeller RPM. These displays can be misleading.

Recommendation:
Clearly state what action is needed: e.g., recommended changes to the standard(s) including the current text of the relevant section(s) indicating deletions by use of strike-out and additions by highlighting or underlining: e.g., reference of the issue to a Task Group for detailed consideration; etc.

To ensure NSF listed products are providing accurate flow rate data, the standard could be revised to require any pumps listed under NSF 50 section 6 be tested/certified to the applicable flow meter accuracy performance test methods and the pump be rated as Level 0-5 like a flowmeter. See below for draft suggested language for balloting and or Task Group.

6.6 Pump performance curve or pump flow rate

6.6.1 For each pump model or model series, the manufacturer shall provide a pump performance curve that plots the pump’s total dynamic head versus the discharge flow rate. The manufacturer shall also have a curve available that plots the net positive suction head (NPSH) or total dynamic suction lift (TDSL), brake horsepower, and pump efficiency in relation to the performance curve. Pumps with a rating of 5 HP (3.7 kW) or less are not required to have a NPSH curve.

For pumps utilizing motors rated for multiple voltages, if the pump performance curve varies between rated voltages, such as may occur between 230v and 208v, the manufacturer shall provide a pump performance curve for each rated motor voltage.

6.6.2 The actual pump curve, as determined in accordance with Annex C, section C.1, shall be within a range of -3% to +5% of the total dynamic head or -5% to +5% of the flow, whichever is greater, indicated by the performance curve. Data taken above 90% full flow shall not be judged to the acceptance criteria.

Pumps with more than one operating speed shall be tested as documented below:

— fixed multispeed pump or motor assemblies, test at each speed; or
— variable speed pump or motor assemblies, test at 100%, 50%, and the lowest speed.

6.6.3 For pumps that provide a flow rate output (such as a visual flow rate in LPM/GPM or other manner), the pump shall be tested in accordance with the following flow meter requirements of Section 23 of this standard:

— Section 23.8 flow rate measurement accuracy
— Section 23.9 flow metering device testing and accuracy levels
— Section 23.12 life testing

Item No RWF-
(For NSF International internal use)
01/2016
6.9 Data plate

6.9.1 A pump shall have a data plate that is permanent; easy to read; and securely attached, cast, or stamped into the pump at a location readily accessible after installation. The data plate shall contain the following information:

— manufacturer’s name and contact information (address, phone number, website, or prime supplier);
— pump model number;
— pump serial number, date code, or specification number;
— whether the unit has been evaluated for swimming pools or spas/hot tubs, if not evaluated for both applications; and
— designation as a self-priming or non-self-priming pump. If the pump is self-priming the maximum vertical lift height shall be specified.

— working flow rate range (i.e., 20 – 100 US GPM) (76 – 379 LPM) if not visible when looking elsewhere on the product;
— accuracy level (i.e., Level 1 or L1) if not visible when looking elsewhere on the product;

Supplementary Materials (photographs, diagrams, reports, etc.):
If not provided electronically, the submitter will be responsible to have sufficient copies to distribute to committee members.

I hereby grant NSF International the non-exclusive, royalty free rights, including non-exclusive, royalty free rights in copyright; in this item and I understand that I acquire no rights in any publication of NSF International in which this item in this or another similar or analogous form is used.

Signature*: ________________ Bill McDowell
Company: Blue-White Industries
Telephone Number: 714-893-8529 x301 E-mail: bmcdowell@blue-white.com
Is this a revision of a previous Issue Paper (if yes put original issue number): __________
Submission Date: October 11, 2019

Please submit to: Joint Committee Secretariat, Jason Snider at jsnider@nsf.org

*Type written name will suffice as signature

Item No RWF-
(For NSF International internal use)
01/2016