

# ETN Teleconference 21/9

Progress made since 4th draft

# Comments collected on draft 4&5

- 99 comments were collected on the 4th draft
  - 84 comments Implemented/Closed
  - 15 comments still Pending, most of them need more testing before they can be solved. Acces to labs have been limited due to Covid-19.
- 2 comments collected on the 5<sup>th</sup> draft

ag	Clause	Comment	Name	Organisatio	ISO/ETN et	Categ	Top	Response	Notes during the ETN meeting	Stat
5	ISO1822		Andrew Thomson	EMW		3		Delete "ISO1822" from intro	agree with response	Imple
5	Currently, high efficiency filter elements are characterized by a limited number of parameters, namely filter efficiency and MPPS (Most Penetrating Particle Size, ISO 1822). These parameters, related to a single filter element, are measured in laboratory conditions close to favorable inland conditions with synthetic dust	Not according to EN 1822 or ISO 29463. Dust load only per ASHRAE 52.1 and 52.2, EN 779, ISO 16890 and ISO 29461-1	Andrew Thomson	EMW		3		Currently, high efficiency filter elements are characterized by a limited number of parameters, namely filter efficiency and MPPS (Most Penetrating Particle Size, <del>ISO 1822</del> ). These parameters, related to a single filter element, are measured in laboratory conditions close to favorable inland conditions with synthetic dust	agree with response	Imple
5	The objective of ISO 29461 - Part 5 is to close the gap	Filter elements/systems shall also be tested in accordance with WG 9 part 1, part 5 is supplementary testing for offshore applications.	S. Taylor	AAF		3		The objective of ISO 29461 - Part 5 is to close the gap between the current filter element characterization conditions (e.g.: ISO 29641 - Part 1) and the site environment.	agree with the response	Imple
6	A minimum service life of 3 years is required, especially for LNG applications. In this case the robustness, loading capacity and pressure drop characteristics of the filter elements become key parameters for design and testing	This statement is not relative to the test standard...to be deleted. The standard should specify the test procedure, rig set up, how to classify product performance etc. Any life expectations would be provided by the filtration vendor and the customer outside of this test standard.	S. Taylor	AAF		2		A minimum service life of 3 years is desirable, especially for LNG applications. In this case the robustness, loading capacity and pressure drop characteristics of the filter elements become key parameters for design and testing	ETN introduction. Implement as proposed.	Imple
6	This procedure is intended for filter elements and filter systems which operating at flow rated up to 8000 m3/h.	The majority of offshore applications are running at 4,250m3/h and 7,650m3/h, thus 2 parameters at 4,250m3/h and 7650m3/h would cover the majority of installations and minimise unnecessary variation, cost and will also help with the droplet generation issues at multiple flows.	S. Taylor	AAF		2	3	4250 m3/h is the reference for filter performance comparison. Some are design for low velocity and will not go over 6000 m3/h for instance whereas others can go over 8000 m3/h. 6000 m3/h is an intermediate flow for filter not able to sustain the 8000 m3/h. Saying that each manufacturer can carry out the test for the flow offering the best capability over 4250 m3/h.	no actions	Closi actio
6	The scope of this procedure includes methods for performance testing of individual filter elements (M5-EPA) and of the complete filtration system. This procedure is intended for filter elements and filter systems which operating at flow rated up to 8000 m3/h.	Depending if an actual test bench is defined, there should be a lower limit of airflow too, as air velocities in the duct may be too low to get a relevant test result.  Seen the intent of the test, the scope of the document should not limit filters based on their fractional efficiency. In principle, any type of filter could be used to verify it's capability to stop water/salts.	V. Van Gelder	Doealdron		1		Lower velocity limit: Not necessary. 3 flows defined. Other flows to be agreed between manufacturer and purchaser. Purchaser will not define irrelevant flow.  Fractional efficiency limitation: Any type of filter can be tested, but filters with lower fractional efficiency would quickly fail.	At this stage compact/square/static filters are the main focus. cartridges filters can be tested. Current standards have the same challenge.	Closi actio
6	The scope of this procedure includes methods for performance testing of individual filter elements (M5-EPA) and of the complete filtration system.	Should we refer to ISO 16890 and ISO 29463	Andrew Thomson	EMW		3		M5-EPA are well known terms. ISO terms can be used in final revision.	agree with the response	Pend term revis
of 17	This procedure is intended for filter elements and filter systems which operating at flow rated up to 8000 m3/h.	Considering we are targeting even testing of filter systems. Please add "per element" at the end of the statement.	G. Mureketti	ENGE		3		This procedure is intended for filter elements and filter systems which operating at flow rated up to 8000 m3/h per filter element.	agree with the response	Imple

# Parts that need future work by core team

- Some technical things needs to be defined such as water spray nozzle size, this is pending a full nozzle investigation where nozzle size and operating parameters will be defined.
- Start defining the classification system, limits on dry salt penetration etc.
- Report – how should the report look like and what should it contain.