SERVICE LETTER

Exhaust Treatment
Technical Services

WV92S335
Issue 1, 28 January 2021

Filter replacement for SICK MARSIC300

Distribution to operators and owners of installations concerned

Next opportunity *

Equipment concerned
SICK MARSIC300 Continuous Emission Monitoring System (CEMS) used in WÄRTSILÄ® SOx scrubbers.

Reference
- System OMM, section valid for CEMS
- Operational Manual SICK MARSIC300

Introduction
Wärtsilä has recently experienced an increased number of cases where the SICK MARSIC300 CEMS has reported the error code S035 with the error text “Ref. energy too low”. This error code relates to a contaminated measuring cell.

Problems
A contaminated measuring cell (part of the analyser) either needs service or replacement.

Preventive action
Replace the accompanying filter in accordance with the makers maintenance interval.

Validity
Until further notice.

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* Next opportunity: Action is highly recommended and should be taken at next opportunity.

Wärtsilä Finland Oy
P.O. Box 244 (Järvikatu 2-4)
FIN-65101 Vaasa

Tel: +358 010 709 0000

www.wartsila.com

Document history

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Introduction

The Continuous Emissions Measuring System (CEMS) is part of the scrubber deliveries from Wärtsilä and monitors the SO_2/CO_2 ratio. The SICK MARSIC300 CEMS consist of several parts including one or more Gas Sampling Unit(s) (hereby called SFU). The SFU is directly mounted into the upper part of the scrubber and provides the analyser and its measuring cell scrubbed exhaust gas for analysis.

Wärtsilä has recently experienced an increased number of cases where the MARSIC300 CEMS has reported the error code S035 with the error text “Ref. energy too low” - this relates to a contaminated measuring cell.

Figure 1, SICK MARSIC300 CEMS (SFU is shown to the left and analyser to the right)

Instructions

To ensure that the measuring cell is in a clean state it is important to ensure that the SFU filter and the air preparation filters are replaced within the makers maintenance interval which are listed below:

- SFU filter to be **replaced** on a maximum **three-month basis**.
  If the flow seen on the MARSIC300 HMI starts decreasing noticeably or the error code S004 with the error text “Flow too low” is present, this is a sign of a contaminated filter ready for replacement (regardless of time in use).
- Air preparation filters to be **replaced** on a maximum **six-month basis**.
  Due to the quality differences for compressed air, the filter elements should be replaced when an oily substance is clearly noticeable on the filters (regardless of time in use). The required air quality is listed in the CEMS manual (part of the OMM), section “Supply gases”.

CAUTION:
Regardless of wording found in manuals, the filters mentioned in this Service Letter (including the measuring cell filter) shall be replaced and **not** attempted to be cleaned.

NOTE:
Rectifying measuring cell contamination is often a costly repair that seldomly is covered by warranty.

When SFU filter replacement is carried out, both the filter and the provided gaskets (as seen in Figure 2) must be replaced.

Figure 2, Parts included in the SFU filter kit

Filter replacement instructions are found in the CEMS manual (part of the OMM), however, additional instructions are shown below due to the importance of correct replacement.

When performing the filter replacement, releasing and applying force to the SFU lid is done via the rotary handle and not by tightening the accompanying fasteners (see Figure 3).

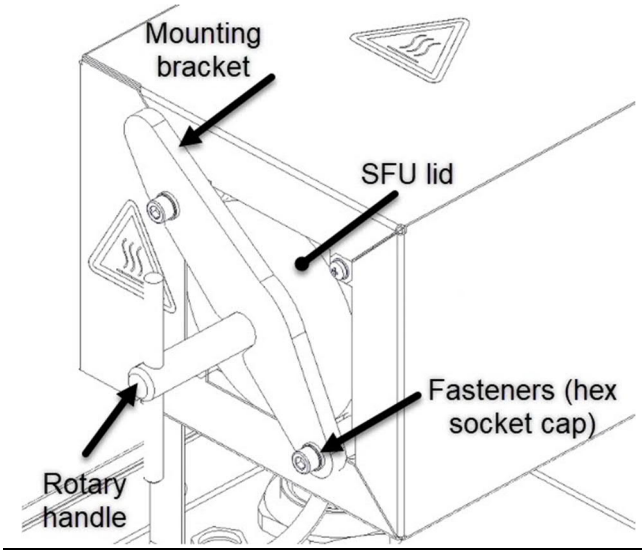

Figure 3, SFU filter fasteners

If applying force to the SFU lid is done by tightening the fasteners, the rotary handle will be able to move freely, hence lack of required sealing pressure is applied to the filter and gasket (see Figure 4 on the next page). This will create an escape path between the filter element and its gasket which likely will result in a contaminated measuring cell.

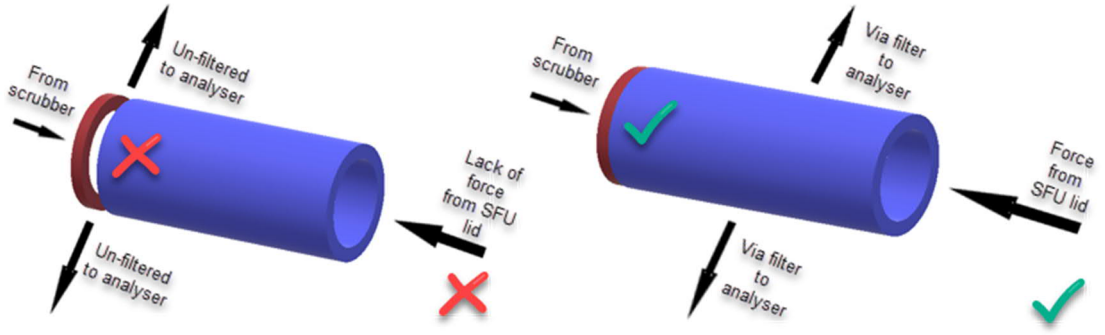

Figure 4, SFU filter installation guidelines (red part illustrates the gasket)

ATTENTION:
Use only the rotary handle for releasing and applying sealing pressure forces to the filter – fasteners are not to be adjusted.

Contact

For services, spare parts and/or tools, please contact your nearest Wärtsilä representative or log in to Wärtsilä Online: www.wartsila.com/wartsila-online

If you do not have the contact details at hand, please follow the link: www.wartsila.com/contact