

# Additional maintenance instructions

# Sample gas probe <u>SP2000-H/**HP**</u>

operating pressure max. 25 bar

see drawing **2 - 1.2.15** No.:2255/03/04.00

#### **Maintenance**

Prior to any maintenance work, it has to be paid attention to the specific safety procedures of the plant and process!

It is difficult to give any recommendation as to a particular maintenande cycle. Depending on your process conditions, a meaningful maintenance cycle must be elaborated for the specific application. An indication that probe-maintenance may be necessary could be a constant decline in the amount of sample gas in the analysis system.

Probe maintenance is restricted essentially to replacing filter element and checking seals.



WARNING! AGGRESSIVE CONDENSATE IS POSSIBLE. WEAR PROTECTIVE GLASSES AND PROTECTIVE CLOTHING!



#### WHEN WORKING WHILE OPERATION:

HIGH SURFACE TEMPERATURES! **180°C !!!** TOUCHING MAY CAUSE BURNINGS. WEAR PROTECTIVE GLOVES! PROBE AND PARTS OF THE PROBE MUST BE PROTECTED AGAINST UNAUTHORIZED PERSONS !

## • Changing the filter element and control of O-ring sealings

- Close ball valve (if fitted). Flush probe in the case of toxic gases!
  Operating pressure in the probe must be released atmospherically!
- Remove probe protection shield after opening pressure clamps.
- Loosen the four M16 nuts "A" (turn to the left side).
- Take the ring (20) and draw the lid flange (19) out of the housing together with filter receptable (9+10) which is connected to the flange.
- Screw out the knurled screw of the filter (4) and change the filter element (6).
- Check filter element seals (5) and change if necessary.
- Check O-rings (7+8) in the filter receptable (9+10) and replace if necessary.
- Clean the filter chamber.
- Get lid flange (19) with connected filter receptable (9+10) into filter housing again by holding the ring (20).
- Tighten firmly the four M16 pressing nuts "A" crosswise (turn to the right side).
- Put on the protection shield.
- Wait approx. 15 minutes for heating up of cold down probe parts, eventually purge probe, open ball valve.

## • Adjustment of the filter lid flange (19)

In order to garantee the sealing and functioning of the probe SP2000-H/HP on a long terms basis, it may be necessary to renew the adjustment of the nuts "B"+"C" for the limit stop "D" of the lid flange (19). The flange (19) has to be fixed to the filter housing in parallel position to the sealing furface "D" to get a common pressure to the O-rings (7+8):

- Remove crosswise the four M16 nuts "A" and draw the flange (19) with connected filter receptable (9+10) out of the filter housing by holding the ring (20).
- Loosen the fixed nuts "**B**"+"**C**" and screw including the fixed plate into direction of the probe flange.
- Take the O-rings (7+8) out of the filter receptable (9+10).
- Lay the lid flange (19) flatly on the sealing surface "D" of the filter housing and fasten regularly crosswise the four M16 nuts "A".
- Adjust the four nuts "B" in that way that they touch the lid flange (19).
- Tighten firmly and equally the plate (12) with four nuts "C" against nuts "B".
- Unscrew the M16 nuts "A" and draw lid flange (19) with connected filter receptable (9+10) out of the filter housing by holding the ring (20) and put in again the O-rings (7+8). Only use intact O-rings!
- Put the lid flange (19) on the saeling surface "D" of filter housing and tighten, firmly and equally the four M16 nuts "A" crosswise.

The torque moment for the nuts "A" should be approx. 75 Nm.

