ENGEZER

SOLUÇÕES EM ANÁLISE DE GASES

SONIMIX 2130 Teste de Conversor de NOx

SONIMIX 2130 NO_x CONVERTER TESTER

The NOx Converter tester has been designed and developed to test the efficiency of the converter NO_2 -> NO of the NOx gas analysers, involved in the emission measurements on the stack monitoring and automotive industry.)

In order to valid NOx measurements, the efficiency of the NO2 converter must be higher than 90 %, it is therefore very important to check easily and precisely the efficiency of the NO2 converter.

The SONIMIX converter tester is based on the process known under the name **Gaseous Phase Titration.** The UV light at about 185 nm emitted by an high energy lamp transforms a part of the Oxygen in the Air in Ozone :

$$3O_2 + UV_{(185\ nm)} \rightarrow 2O_3$$

If a more important concentration of NO2 is required, the system could be alimented with pure oxygen.

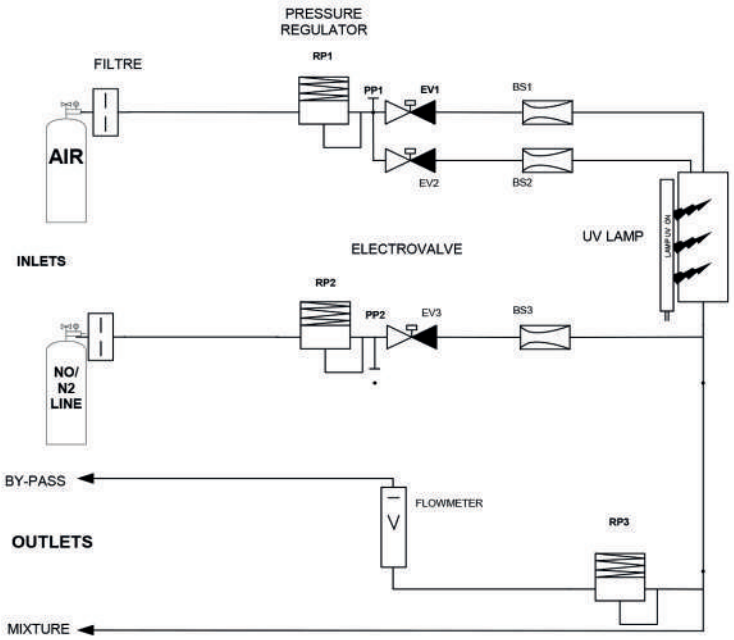
After to be created, the ozone and the NO (provided by a pre-mixed cylinder of 100 ppm NO/N2 for example) are mixed together in a reaction chamber. The following reaction takes place :

$$NO + O_3 \rightarrow NO_2^* + O_2 \qquad NO_2^* \rightarrow NO_2 + UV_{(600..1200\ nm)}$$

The NOx converter tester has been designed to generate a stable NO2 concentration with a small reaction time. The good results are got using together sonic nozzles and high stability pressure regulators.

The NOx converter tester is often used together with a multi-steps gas divider also based on sonic nozzles and high precision pressure regulators.

Principle diagram:



Technical Data:

NOx converter tester	Low concentrations	High concentrations
O3 generation (setting by potentiometer or remote control)	30 to 100 ppm	300 to 1200 ppm
Or as alternative	*5 to 50 ppm*	
NO2 generation (setting by potentiometer or remote control)	25 to 90 ppm	280 to 1100 ppm
Inlet pressures	2.5 to 4 bar rel. (37 to 58 PSI)	2.5 to 4 bar rel. (37 to 58 PSI)
Outlet pressure Standard	< 350 mbar rel (< 5PSI)	< 350 mbar rel (< 5PSI)
Option 1	910 mbar rel. (13 PSI)	910 mbar rel. (13 PSI)
Alimenting gases Diluted line	100 ppm NO in N2	1200 ppm NO in N2
Carrier line	Clean and dry Air	100 % O2 (class5.0)
Stabilisation time for the NO	< 1 min.	< 1 min.
Stabilisation time for the O3	< 3 min.	< 5 min.
Stabilisation time for the NO2	< 3 min.	< 5 min.
Flow on the Air line	0.2 Nl/min	0.2 Nl/min
Flow on the NO line	2 Nl/min	2 Nl/min
Materials in contact with gases		
NO	Stainless steel, Teflon, Gold, Silver	Stainless steel, Teflon, Gold, Silver
O3 and NO2	Stainless steel, Teflon, Gold, Silver, Quartz glass	Stainless steel, Teflon, Gold, Silver, Quartz glass
Air	Stainless steel, Aluminium, Silver	Stainless steel, Aluminium, Silver
Presentation of the device	As a module mounted in a gas divider or in a stand alone casing.	As a module mounted in a gas divider or in a stand alone casing.
Fluidic connections	¼ " or 6mm Swagelok	¼ " or 6mm Swagelok

Companion gas divider	(See also the SONIMIX 2106 line data sheets)
Number of dilution steps	10, 16, 20, 32, 64,128,…, 1024, 2X10, 3x10,…
Total flow of the mixture	5 Nl/min (other values of flow upon request)
Precision of the mixture	< 0.6% of the generated mixture
Reproducibility	< 0.3%

Options and accessories :

Option and accessories	Description
SONIMIX 2106B-x OP5.1	Nox converter tester 5 to 50 ppm
SONIMIX 2106B-x OP6.1	Nox converter tester 25 to 100 ppm
SONIMIX 2106B-x OP7.1	Nox converter tester 300 to 1000 ppm
SONIMIX 2106B-10OP8	Outlet pressure for the NOx converter tester : vacuum to 1 bar rel
SONIMIX 2106B-10OP97	Voltage 230 VAC / 50 Hz
SONIMIX 2106B-10OP98	Voltage 230 VAC / 60 Hz
SONIMIX 2106B-10OP99	Voltage 117 VAC / 60 Hz

REPRESENTANTE:

ENGEZER
SOLUÇÕES EM ANÁLISE DE GASES

Tel.: (21) 2128.5300 – Fax: (21) 2128.5330
engezer@engezer.com.br
www.engezer.com.br

Caso queira adaptar este produto a suas necessidades usando um sistema de condicionamento, uma automação ou formando um produto, contate:

COMERCIAL@ENGEZER.COM.BR

**para mais informações ou preços*

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GASES

(21) 97144.1593 | @engezer | Engezer Spengezer | sergio.engezer

Tel.: (21) 3445.8120 : **E-mail:** engezer@engezer.com.br : **Site:** www.engezer.com.br