

Zaprezentowano zgłoszenie patentowe pt. „Preconcentrator of gas samples”, które zdobyło:

1. Złoty medal targów,
2. Nagrodę specjalną Chińskiego Stowarzyszenie Wynalazców oraz
3. **Złoty medal Międzynarodowej Federacji Stowarzyszeń Wynalazców IFIA.**



No. HK-20170091



2017 International Invention Design Competition

DIPLOMA **Special Award**

香港

Awarded to

A.Rydosz, K.Marszalek

from

POLAND

for

PRECONCENTRATOR OF GAS SAMPLES

THE PRESIDENT OF JURY

Prof. Shu Geng

THE CHAIRMAN OF IIDC

Dr. Kou-Chen Wu

HONG KONG, 6-8 DECEMBER 2017

CERTIFICATE

PRESENTED TO

Artur Rydosz, Konstanty Marszalek

FOR THE BEST INVENTION

PRECONCENTRATOR OF GAS SAMPLES

**International Invention and Design Competition
IIDC 2017**

December 06. - 08 / Hong Kong

December 2017

DATE



Alireza Rastegar

SIGNATURE



Ref: 17-150



PRECONCENTRATOR OF GAS SAMPLES

APPLICANT

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DEVICE DESIGN

Fig.1. Preconcentrator of gas samples

- 1. LTCC ceramic plate
- 3. channel
- 4. Gas inlet
- 5. Gas outlet

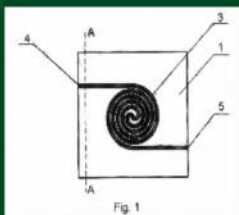
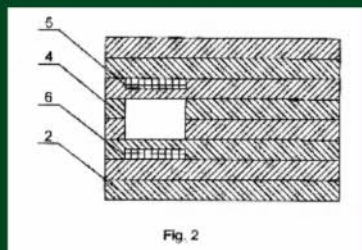


Fig.2. Preconcentrator cross section



- 2. LTCC ceramic foil
- 4. Channel
- 6. Lower heater
- 7. Upper heater

HEALTH

What for?

- for glucose level measurements by diabetics with:



no pain,
no blood
no stress

It is necessary to analyse your breath

- for fight with smog in the cities
- For early detection of low level danger gas content eg. in mine

INVENTION DESCRIPTION

The object of invention is preconcentrator of gas samples shown in figure 1 and its cross section shown in figure 2. This device consists of several LTCC foils (2). In a middle foils a spiral channel is made (3) with dimensions adequate to a absorbing powder or balls. At the end of channel there are inlet hole (4) and outlet hole (5). Additionally there are two heaters upper (7) and lower (6) situated nearby the channel. The heater cause degasing of absorber during heating procedurę. The presented device permit to detect very low gas content in gas mixture using commercial gas sensor with sensistivity lower then gas content in mixture. Preconcentrator is a part of a whole system with integrated gas sensor matrix, controll unit and communication unit.



DOCUMENTS

PATENT APPLICATION:
125073 2016.04.16

Related Granted Patents

- Microconcentrator of Gases
PL 225138



- Integrated gas sensor matrix
(pat. application 2016)
GOLD MEDAL IWIS 2017

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