

# e-bulletin

Vaksis Vacuum Systems Bulletin

Year: 1, No: 2, June 2011

## PVD AND CVD COATING SYSTEMS FOR VARIOUS APPLICATIONS

[www.vaksis.com](http://www.vaksis.com)



2 golden  
suggestions



new product  
PETRoll



activities

- PVD: Physical Vapor Deposition
- CVD: Chemical Vapor Deposition

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## For Vacuum Systems Users

### 2 golden suggestions!

1. Pressure gauges measure the pressure at different pressure ranges and with different methods. You should choose pressure gauges according to the environment (UHV, VHV, HV, LV, reactive gas, etc.) that you want to measure the pressure. Remember that in the vacuum systems, you may need to use the pressure gauges which work with more than one vacuum method.

2. You should make preliminary study about the pressure that you need at vacuum-operated coating systems.

According to which technique you will use, (evaporation, sputtering, CVD etc.) you should make a decision about the distance between substrate and evaporation source. Then calculate the rate of reaction between residual gases in vacuum environment and the material to be coated. If reaction rate is high and you need to work at low coating (material deposition) rate, request highest vacuum (low pressure); if not, you can request lowest vacuum (high pressure) environment and reduce the prices.

We will continue giving golden suggestions in the next bulletins...

- UHV: Ultra High Vacuum
- VHV: Very High Vacuum
- HV: High Vacuum
- LV: Low Vacuum



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## new product PETRoll

Vaksis PetRoll designed and manufactured for roll-to-roll (R2R) coatings and used for deposition on elastic surfaces (web) which are made of PET or other materials.

The materials such as Al, Ag and Mg can be coated with high homogeneity by Knudsen-cell-type evaporation method.

Continual coating on the elastic material with the dimensions of 100 m in length, 300 mm in width and 0.3 mm in thickness can be achieved without any vacuum interruption. In addition, thickness can be measured simultaneously.



### Technical Specifications:

Base pressure:  $< 1 \times 10^{-6}$  torr

Substrate size:  $< 300$  mm wide, 100 m long,  
0.3 mm (300  $\mu$ m) thick

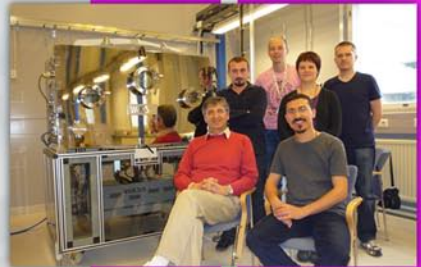
Thickness measurement: In situ Measurement with  
Quartz Crystal

Deposition Mode: Upward

Deposition Methods: Knudsen-cell-type evaporation

Number of Sources: 5

Control: Full automation by PC



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## activities

### CONFERENCE, SEMINAR, MEETING...

#### ICMTF 2011

38<sup>th</sup> International Conference on Metallurgical  
Coatings and Thin Films,  
San Diego, CA, USA, 2<sup>nd</sup> -6<sup>th</sup> May 2011

#### 1.Surface Treatment Symposium

Istanbul Technical University, Turkey  
15-18<sup>th</sup> June 2011

#### NanoTR VII

Sabanci University, Istanbul  
27<sup>th</sup> June- 1<sup>st</sup> July 2011

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