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Vaksis Vacuum Systems Bulletin

Year: 5, No: 14, July 2015

PVD AND CVD COATING SYSTEMS FOR VARIOUS APPLICATIONS

www.vaksis.com



production of
thin film coating
system with a 90%
domestic content

2015 productivity
improvement
project award

PVD-handy/2T sm

activities

- PVD: Physical Vapor Deposition
- CVD: Chemical Vapor Deposition
- PVD-handy/2T sm: PVD handy 2 Thermal small

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Project: Production of Thin Film Coating System with a 90% Domestic Content

High technology instruments are commonly used at universities, state-owned research institutes and private R&D centers. For this reason, the most important customers of Vaksis vacuum coating systems are academicians who conduct relevant projects. Funding organizations (governmental or private) financially support their projects. The funding reserved for instrument purchasing is limited and low in most project budgets.

Systems that include thermal evaporation sources are preferred because they enable working with variety of materials. Moreover, these systems are easy to operate. Within the scope of the project, the already marketed thermal evaporation system is optimized and foreign content percentage is dramatically reduced. To achieve this reduction, our company has designed and produced most of the vital components, which helped lowering the overall product cost as aimed. Here, the important point has been making no compromise on system quality while lowering the product cost and improving the user-friendliness. So, with this project we did not only lower the cost of our product we also raised the quality of our product.



Dr. Baybars ORAL
COMPANY MANAGER

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While implementing the project, Vaksis vacuum valves, Vaksis diffusion pump and Vaksis water cooling unit (chiller) were designed and produced with a 100% domestic content and these new system sub-components were integrated into the redesigned "PVD-handly/2T sm" system. Furthermore, works on adding PLC (Programmable Logic Control) to the system were brought to a successful conclusion.

Production costs were reduced and faster and more effective technical service advantage was gained with diffusion pump, all the necessary vacuum valves and the water-cooling unit, which were developed in approximately seven months of intensive work. The user-friendliness was improved by modifying the operation technique of the system from manual operation to automatic operation by utilizing PLC and/or PC. With this effort, the foreign content in the system was reduced to 9,3 %. This system has the lowest foreign content among the systems that has been produced by Vaksis. The system produced successfully and systems were already sold.

In order to improve the capacity of competitiveness of Turkey and reach productivity-based sustainable economic structure, National Productivity Improvement Project Awards were given by Ministry of Science, Industry and Technology, which was organized for the second time in this year. 2015 National Productivity Improvement Project Award has been given to Vaksis for the project "Production of Thin Film Coating Systems with a 90% Domestic Content".



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COMPANY MANAGER

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new product

PVD-handy/2T sm

Manually controlled, special design thin film vacuum coating systems including two thermal evaporation systems for low budget projects.



Designed and manufactured to deposit controlled nano- and micro-meter-thick thin films/coatings on flat surfaces of max. 50 mm diameter wafers or glass.

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new product

PVD-handy/2T sm



Technical Specifications:

Base Pressure < 5×10^{-7} Torr

Leak Rate < 10^{-8} Torr. l/s

High-Speed Pump: 700 l/s diffusion pump

Mechanical Pump: min. 10 m³/h, (dual stage)

Substrate Size: 50 mm diameter

Thickness Measurement: In-situ measurement with Quartz X-tal Oscillator

Deposition Mode: Upward (all sources)

Number of Sources: 2

Loading: From top

Control: Full automatic pumping, manual evaporation

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activities



Ankara, Turkey (April 27, 2015)

<http://vgm.sanayi.gov.tr/Pages.aspx?pageID=849&lng=tr>

“Productivity Week” activities are organized annually by Republic of Turkey, Ministry of Science, Industry and Technology and during the week, aiming at different segments of the community, activities with productivity theme are organized in many provinces, Ankara in particular.

Furthermore, on the purpose of improving productivity and supporting the innovative work and projects in business world, successful enterprises are awarded with “Productivity Improvement Project Award”.

National Productivity Improvement Project Award which is aiming to point out importance of productive working, and to contribute to become widespread of productivity consciousness and good practice examples were given to winners with the ceremony which was organized on April 27 at Congressium Ankara.

The project of Vaksis with title “Production of Thin Film Coating Systems with a 90% Domestic Content” has been awarded National Productivity Improvement Project Award.



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activities

We attended...

2015 SVC TechCon Exhibit
Santa Clara, CA ABD (April 28-29, 2015)

<http://www.svc.org/ConferencesExhibits/2015/2015-TechCon.cfm>

SVC (Society of Vacuum Coaters) 2015 TechCon was held in Santa Clara, USA from April 28th -29th, 2015.

Vaksis met with relevant participants at the booth #1412.



SOLAR TR-3
Ankara, Turkey (April 27-29, 2015)

www.solartr.org

SOLAR TR-3 was held in Ankara, Turkey from April 27th to 29th, 2015.

Vaksis was the participant of the exhibition and met with relevant participants at the booth #3 at the conference venue.



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activities

We attended...

E-MRS 2015 Spring Meeting
(European Material Research Society)
Lille, France (May 12-14, 2015)

http://www.emrs-strasbourg.com/index.php?option=com_content&task=view&id=96&Itemid=1626

E-MRS 2015 Spring Meeting was held in Lille, France from May 11th to 15th, 2015.

Vaksis was a participator of the exhibition and met with participants at the booth #61.



We are planning to attend...

1st International Conference on Perovskite Solar Cells and Optoelectronics (PSCO-2015)
Lausanne, from September 27th -29th, 2015

www.pSCO-conference.org/

1st International Conference on Perovskite Solar Cells and Optoelectronics which will be organized for the first time this year, will be held in Lausanne, Switzerland from September 27th to 29th, 2015.

As one of the main sponsors, Vaksis will meet with relevant participants at the booth placed at the fair venue and give detailed information about the brand new Perovskite system.



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