



Bond voor Materialenkennis

VWT



Vereniging voor Warmtebehandelingstechniek

www.vwt.myweb.nl

Uitnodiging

De Vereniging voor Warmtebehandelingstechniek
organiseert op:

donderdag 19 mei 2011

**Lezingenavond in het Amrât Hotel Brabant te Breda
met als thema:**

Recente ontwikkelingen in de analysetechnieken

- digitale microscopie
- GD-OES

Algemene Ledenvergadering

Ontvangst en registratie	17.30 uur
Sluiting	21.30 uur

Programma

17.30 uur **Ontvangst-Registratie-Aperitief**

18.00 uur **Diner**

19.25 uur **Opening door de voorzitter van de Vereniging voor
Warmtebehandelingstechniek**
B. Vandewiele, Surface Treatment Company NV

19.30 uur **Algemene Ledenvergadering**

19.45 uur **GD OES:an analytical technique to reveal the structure of heat
treated metals**
P. Chapon, Horiba Scientific

Heat Treatment is used in the field of aerospace, power generation, automotive, railway, pumping and general engineering industries for manufacturing processes. Thanks to control of heating and cooling, the process allows altering the physical and mechanical properties without modifying the product shape.

The process requires long treatment time under a selection of controlled atmospheres (Nitrogen based mixes, enriched with hydrocarbons and/ or ammonia). Such complex procedures need efficient controls. The efficiency of a heat treatment process is usually checked by mechanical tests and microscopic observation of a polished cross section of a sample. The only chemical information available is the certificate of the incoming metal. Occasionally a spark spectrometer can be found to verify the certificates provided by the suppliers of parts.

GD-OES brings the capability to perform elemental depth profile analysis as a complement to the mechanical testing for enhanced understanding of the processes and better control of the parts.

GD-OES, with its ability to measure depth profile composition, provides an efficient solution to track Carbon, Nitrogen, optionally Oxygen and the main metallic elements, before during and after the process.

Beyond elemental depth profile analysis, an innovative use of the GDOES has been presented by Professor Shimizu from Keio University in Japan which consists in using the instrument as sample preparation before SEM observation. High contrast images are readily obtained as some preferential sputtering takes place. The unique features of the GD source (high density plasma with low energy sputtering ions) make the preparation time extremely short, normally less than 1 min including sputtering for less than 10 s. Even cross sections can be prepared that way.

Methodology and results will be presented.

20.30 uur **Koffiepauze -Presentatie/demonstratie van de apparatuur.**

20.45 uur **Next generation digital microscopy to meet today's ever-changing industry demands.**

P. Nowak, Keyence International

Instant and accurate microscopic observation and measurements will become a standard requirement for the most challenging targets in diverse industries.

Digital microscopes unlock this potential providing ultra-precise observation up to 1nm, advanced analysis functions and 2D / 3D Measurement capabilities.

Discover the secrets of a 16-bit Resolution Microscope with unrivalled performance and explore the sub-micron range with a Colour 3D Laser scanning Microscope featuring 18.000x magnification.

21.30 uur **Sluiting**

DEELNAMEKOSTEN

De kosten, exclusief BTW, bedragen voor:

Leden VWT € 46,22

Leden BvM € 67,23

Niet-leden € 88,24

Betaling bij registratie met gepast geld wordt op prijs gesteld.

AANMELDING

U kunt zich aanmelden per telefoon +31 (0)40 296 99 13

of per e-mail: info@materialenkennis.nl

ANNULERING

Bij afwezigheid op de bijeenkomst zonder voorafgaande afmelding uiterlijk 24 uur voor de bijeenkomst, zijn de volledige deelnamekosten verschuldigd.

ROUTEBSCHRIJVING

U ontvangt een routebeschrijving naar het **Amrât Hotel Brabant, Heerbaan 4, 4817 NL te Breda** bij de bevestiging van uw aanmelding.

AGENDA

15-09-2011

8-12-2011

Het bestuur van de VWT hoopt u te begroeten op 19 mei 2011!

B. Vandewiele, voorzitter

H. Veltrop, vice-voorzitter

R. de Vries, penningmeester

R.C. Jongbloed

N.C.W. Kuijpers

F.A. van Dartel

G. Claus

K. Bonny

R. Devos

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