

# Production Technology for Gears



**EUROTRANS ACADEMY**

6 – 10 March 2023 – Leuven, Belgium

## Context

Although the power transmission engineering industry is an important industry branch, universities programs have only limited courses on gears. In Europe, a mechanical engineer gets on average 5 hours of specific gear training. This is far too less to be effective in industry. Therefore, EUROTRANS identified world class gear experts and trainers and developed an extensive modular Gear Training covering all aspects from geometry and design over production technology to quality control and failure analysis. Addressing a European audience, the residential training program is organised in several locations in close connection with famous laboratory. This training on **Production Technology** is organised with Sirris and the University of Leuven. This year, the training course will take place in Leuven, Belgium and we will look into new technologies such as surface treatment via laser that can be used for among others noise reduction.

## Target audience

This course is oriented to people active in the gears and transmissions sector with a basic engineering background and provides improvement of knowledge on production technology aspects of gears and gear systems. Further, this course is given in English and contributes to improve the language skills of the participants by interacting with the experts and with their peers from other countries.

## Venue

The training course will be organised in Leuven, Belgium. The main location is the hotel 'The Lodge Leuven', Kantineplein 3 in Heverlee, Leuven (Belgium). However, part of the training will take place in the buildings of Sirris in Leuven and of KU Leuven, both locations at walking distance from The Lodge.

## Program

### DAY 1 – 06/03/2023 @Laboratories of Sirris

- Basic of hardening - Thermal Surface hardening
- Hardening principles - Introduction-flame-laser
- Basic of hardening: physical metallurgy, microstructure
- Texturing of surfaces via laser and laser hardening & Visit Laboratories Sirris

### DAY 2 – 07/03/2023 @The Lodge Heverlee

- Thermochemical case hardening processes
- Case hardening

Trainer Day 1 & 2: **Bernard Vandewiele**



### DAY 3 – 08/03/2023 @The Lodge Heverlee

- Basics to know about Gears
- Gear Hobbing and Hobbing of Large Module Gears
- Chamfering & Deburring of gears
- Gear Shaping
- Power skiving
- Gear cutting tools & Workholding for Gear Production

### DAY 4 – 09/03/2023 @KULeuven

- Threaded Wheel Grinding Technology
- Gear Shaving
- Gear Honing
- Important aspects of premachining for hard finishing
- Profile Grinding Finishing alternatives
- Gear inspection
- Gear Noise (NVH) Analysis Possibilities

Trainers Day 3 & 4: **Yvo Quintiens, Dr. Türich, Mr. Klein and Mr. Kreschel**



**DAY 5 – 10/03/2023 @KU Leuven**

- Alternative and new ways of production for gear manufacturing
- Visit of the Laboratories of KU Leuven

Trainer Day 5: **Prof. Bert Lauwers**



The program may be subject to changes. More details on timing and exact location will be made available upon registration. In case of questions, do not hesitate to contact [jean-marc.timmermans@agoria.be](mailto:jean-marc.timmermans@agoria.be)

## Accommodation

Room reservations should be made directly with the hotel. Please note that the **accommodation is NOT included** in the price of the training program.

We recommend the following hotel:

/Hotel The Lodge Heverlee

Kantieneplein 3

B – 3001 LEUVEN

Tel: +32 16 50 95 09

Contact person: Katrien

Direct tel: +32 16 20 74 33

E-mail: [heverlee@lodge-hotels.be](mailto:heverlee@lodge-hotels.be)

**>> Please confirm your room reservation directly to the hotel preferably one month before the start of the course.**

## Laboratory Visits & Social program

The training package includes evening diners and social activities such as a guided walk through the city centre of Leuven as well as a visit of Sirris Laboratories and KULeuven Laboratories. The social program can be subject to changes.

## Cancellation conditions

No charge if cancelled at least 30 days before the start of the course

> For cancellations at least 7 days before the start of the course, 50% of the registration fee will be refunded

> No refund will be made for cancellations received after 7 days before the start of the course, however replacement of a registered person is possible

**>> In case of insufficient registrations, the course will be cancelled and refunded.**

**By registering for the Gears Training, you can take part to the complete program, spread over 5 days, including the laboratory visits and social program.**

As a member of one of the partner associations (see below), you enjoy a **discount** by selecting a ticket with the denotation “for members of the Eurotrans community” during registration.

If you are a company located in Flanders, please contact [jean-marc.timmermans@agoria.be](mailto:jean-marc.timmermans@agoria.be) in order to check if you can be eligible for participation in the framework of the industrie partnerschap program.

If you have any question, you can contact Ms. Lea De Roeck from Agoria via e-mail: [lea.deroeck@agoria.be](mailto:lea.deroeck@agoria.be)

## Partner associations

**.AGORIA**

 **ARTEMA**  
Les industriels de la Mécatronique  
Membre de la FIM

 **assiot**  
Sistemi di Trasmissione  
Movimento e Potenza

**BGA**  
British Gear Association

  
**MIB**  
ASSOCIATION OF  
TURKISH MACHINE  
MANUFACTURERS

 **SWISSMEM**

 **Technology Industries  
of Finland**

 **VDMA**

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