

ECO-DESIGN OF REFRACTORIES

E FOR ECOLOGICAL, ECONOMIC, ECO-ENERGETIC

FIRE - ECerS SUMMER SCHOOL FOR STUDENTS AND INDUSTRIALISTS

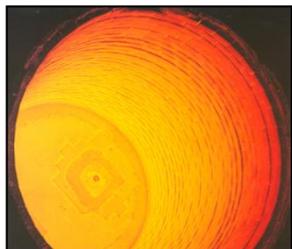
AACHEN, Germany - Tuesday 28th to Thursday 30th June 2022

WELCOME TO AACHEN (GERMANY)

It is a great pleasure to invite you to take part to the 2022 FIRE-ECerS Summer School: Eco-Design of Refractories which will be held at the RWTH Aachen University, Germany from June 28th to June 29th. A visit of Tata Steel plant in Ijmuiden, The Netherlands is planned on June 30th.



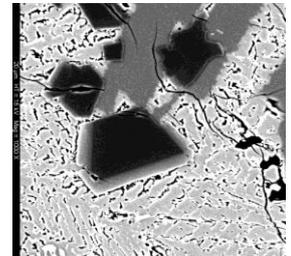
This Summer School aims to promote cooperation on educational programs in refractories among the major institutions and companies of the sector. This school will favour networking between young scientists and experienced professors and experts. It will create links between different scientific communities (ceramics, refractory manufacturers, metallurgy, mechanics, thermodynamics, instrumentation, sustainable development) and between industrial and academic research.



FACE TO FACE AND VIRTUAL TRAINING COURSE

Integrating 3 aspects : fundamental approach, industrial needs, new approaches on innovations

Proposing a good balance between : the courses, an industrial tour, exchanges and conviviality



CONTACT

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MORE INFORMATION :
https://ecers.org/news/146/419/0622-FIRE-ECerS-SUMMER-SCHOOL/d.ceramic_details_conferences

REGISTRATION:
<https://docs.google.com/forms/d/e/1FAIpQLSeDsnmuT1s4-hJAcjRXk9BPmkR-EVyFUraP3DBabu-FPM6pg/viewform>

Deadline for registration: 15/05/2022

SPONSORS



ECO-DESIGN OF REFRACTORIES

E FOR ECOLOGICAL, ECONOMIC, ECO-ENERGETIC FIRE - ECeRS SUMMER SCHOOL FOR STUDENTS AND INDUSTRIALISTS

AACHEN, Germany - Tuesday 28th to Thursday 30th June 2022

PROGRAM

TUESDAY, JUNE 28TH

Refresher of basic knowledge

- Raw materials
- Shaped refractories
- Monolithic refractories : LCC, ULCC, NCC

The Fundamentals : Corrosion and thermo-mechanics

- Thermodynamic and kinetics
- Reactive transportation
- Fracture and creep

Exhibition Cerami^ok

Poster session and video session

Banquet

WEDNESDAY, JUNE 29TH

Industrial and economic needs

- Refractory values in use
- How to innovate ?

Future challenges for refractories

- Sensors, instrumentation and refractory needs
- Challenges for data mining and machine learning in the refractory industry and end-users
- Circular economy

Refractories for Steel Making

- Critical wear factors and optimum choice
- Improvement of steel cleanliness

DEPARTURE TO IJMUIDEN

THURSDAY, JUNE 30TH

Refractories for Steel Making

- The new face of the steel industry
- Management and production of iron by H₂ – consequences for refractories

Visit of Tata Steel Plant

Discussion, Brain Storming

End of the FIRE-ECERS School (16h30)

LECTURERS

- Dr. Andus Buhr – ALMATIS, Germany
- Dr. Erwan Guéguen – RHI MAGNESITA, Austria
- Dr. Bruno Touzo – CALDERYS, France
- Dr. Hong Peng – ELKEM, Norway
- Prof. In-Ho Jung – Seoul National University, South Korea
- Dr. Thorsten Tonnesen – RWTH Aachen University, Germany
- Prof. Harald Harmuth, Dr. Dietmar Gruber, Dr. Shengli Jin – Montanuniversität Leoben, Austria
- Dr. Chris Parr – Imerys, France
- Dr. Chistoph Wöhrmeyer – Imerys, Germany
- Prof. Jacques Poirier and Prof. Emmanuel de Bilbao – Cemhti / University of Orléans, France
- Dr. Philippe Blumenfeld – Refractory expert – formerly ArcelorMittal
- Matheus Santos and Prof. Victor C. Pandolfelli – Universidade Federal de São Carlos, Brazil
- Dr. Carmen Baudín – Instituto de Cerámica y Vidrio, CSIC, Spain
- Margarita Alvarez – Alfran, Spain
- Prof. Christos Aneziris – University of Freiberg, Germany
- Dr. Paul van Beurden – Tata Steel, The Netherlands

**THE TRAINING COURSES AND
CONFERENCES WILL BE MEMORIZED
USING VIDEO DOCUMENTS!**