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# **STUDENT WORKSHOP**

## European Forum for Reciprocating Compressors



# Student Workshop sponsored by EFRC\* June 11-14, 2018

Netherlands / Germany

Gain an insight into reciprocating compressor technology! And win an attractive price!



COMPRESSORS

This Student Workshop sponsored by EFRC is cost-free for participants.

## Who we are

#### The EFRC Organisation

The European Forum for Reciprocating Compressors was founded in June 1999 as a non-profit association to support European users, manufacturers and scientists working with reciprocating compressors in terms of technology, exchange of experience, formation and enforcement of standards and precompetitive research.

#### **Our Background**

The increasing demand for economic plant operation has led to a critical discussion of the equipment as to selection, design, maintenance and automation. The well-known advantages of the reciprocating compressor – high efficiency in many different operating conditions, comparatively easy regulation possibilities, suitability for light gases, high compression ratios, and many more – have led to a renaissance of this type of machinery.

## **Our Goals are**

### Exchange of Information and Experience

The EFRC acts as a 'forum of ideas' providing scientists and engineers the opportunity to spread new ideas or to carry them out. The end users in their turn can take the opportunity to report on their experience with the reciprocating compressor and to request the industry concerned for solutions to problems.

Improve the Image of Reciprocating Compressors It will be shown that reciprocating compressors meet all the requirements of modern machines and even create new possibilities.

#### **Improved Specifications and Standards**

The forum will also offer an opportunity for constructive criticism concerning the internationally used US standards. The aim should be to provide an interpretation and improvement of the above regulations adapting them to modern experience and specific European needs.

## Programme

#### Day One: June 11, 2018

 11:00 Arrival / Welcome of the Students at TNO Science and Industry in Delft, Netherlands Introduction to EFRC Lecture: "Fundamentals of Thermodynamics" Lecture: "Fundamentals of Reciprocating Compressors" Lecture: "Pulsations & Vibrations" Night Stop in Delft, Netherlands

### Day Two: June 12, 2018

Visit of Shell Pernis Lecture: "The Role of Recips at Shell" Transfer Night Stop in Rheden, Netherlands

### Day Three: June 13, 2018

Visit Howden Thomassen Compressors BV (OEM) Lecture: "Company Presentation" Lecture: "Reciprocating Compressors" Visit Enduser Transfer Night Stop in Übach-Palenberg, Germany

### Day Four: June 14, 2018

Visit at NEUMAN & ESSER (OEM) Lecture: "Company Presentation NEA" Lecture: "Reciprocating Compressor Components" by STASSKOL Plant Tour Handover of EFRC Workshop Task

15:00 End of EFRC Student Workshop Transfer to Airport / Trainstation

Follow us on: in

## Win a price!

At the end of the workshop all participants will get a challenging task to solve. Closing date is two weeks later on June 29, 2018.

The owner of the best solution will win an attractive price.

## Want to take part?

Use this great opportunity and register as soon as possible as space is limited and fills up quickly.

Please, send your application to Mrs. Maja Schütz via email: contact@recip.org. European Forum for Reciprocating Compressors e. V. c/o Technische Universität Dresden, 01062 Dresden

Participants will be selected by the EFRC Student Workshop Committee.



\*This Student Workshop sponsored by EFRC – European Forum of Reciprocating Compressors – is cost-free for participants. It includes accommodation, food and travelling expenses, each student gets a max. refund of EUR 300.- for the transfer to Amsterdam, Netherlands and back home from Dusseldorf, Germany.

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