

## **Hysomer**

### **the development of a catalytic process for producing high-octane fuel**

In response to a trend of minimising the lead content in gasoline, in the 1960s Shell developed a process for isomerising “tops” (a C5/C6 fraction) to increase the octane number of that fraction. This process is called Hysomer (from: Hydroisomerisation). It is based on a Pt/zeolite mordenite catalyst. The first commercial unit, 400 t/d, came on stream in May 1970 in a Shell refinery near La Spezia, Italy. Up till the early 1990s many Hysomer units were built, mostly in combination with Union Carbide’s Isosiv process to eliminate all n-paraffins (by separation, also based on a zeolite), thus maximising the octane gain. The present symposium highlights the development and the first implementation of the Hysomer process, as well as its further history and some modern ideas concerning the C5/C6 hydroisomerisation reaction mechanism and zeolite science.

The KNCV section Catalysis and the Dutch Chemical Historical Group organise the symposium together with Shell Technology Centre Amsterdam (STCA), which is also the venue of the symposium.

### **Programme**

10:30 h Arrival and coffee

11:00 h Words of welcome and HSE message

Dr. Marja. Zonneville, site manager STCA

11:10 h Introduction – em. Prof. Dr. Rob van Veen

11:20 h Development of the first Hysomer catalyst – em. Prof. Dr. Herman Kouwenhoven

12:00 h Research aspects of the La Spezia start-up – em. Prof. Dr. Ir. Tiong Sie

12:40 h Lunch

13:45 h Hysomer: commercial experience and outlook – em. Prof. Dr. Rob van Veen

14:15 h Reaction mechanism of paraffin isomerisation – Prof. Dr. Rutger van Santen

15:00 h On mesoporous zeolites – Dr. Johan Groen

15:45 h Drinks

17:00 h End

## **Registration and costs**

A maximum of 125 participants can be hosted.

Please register by transferring the appropriate amount to bank account 4757263 of Federation of European Zeolite Associations te Delft, and SIMULTANEOUSLY registering by e-mail to [p.j.kooyman@tudelft.nl](mailto:p.j.kooyman@tudelft.nl). Deadline for registration is February 1, 2012.

Note that STCA can only grant access to the venue to those who have pre-registered AND are carrying VALID ID upon arrival.

A detailed programme of the full-day symposium (including route description) will be sent to registered participants. Lunch and beverages are included in the registration fee.

### **Costs:**

(Former) employee of STCA	10 Euro
Member of KNCV sectie Katalyse, CHG, NPT	10 Euro
All other participants	15 Euro

On behalf of the organising committee,

Patricia Kooyman