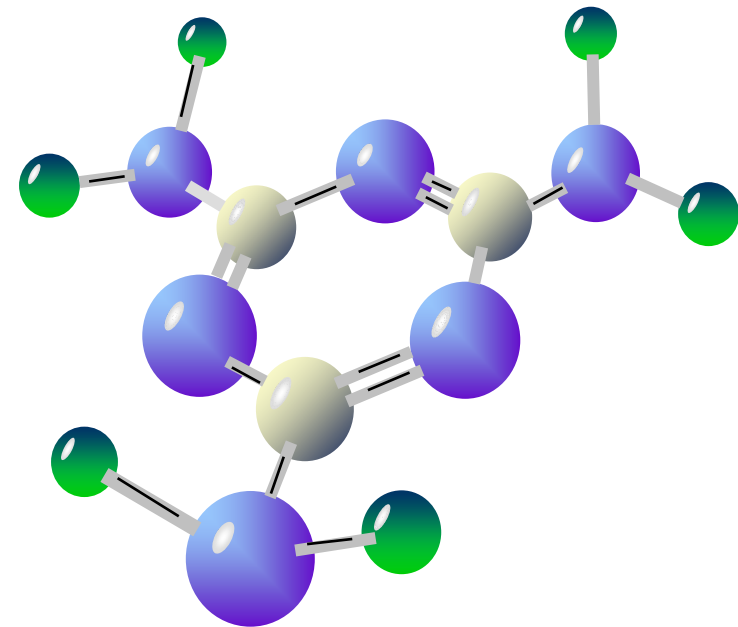


# Outlook for the global melamine industry.

Moscow

M. Jansen

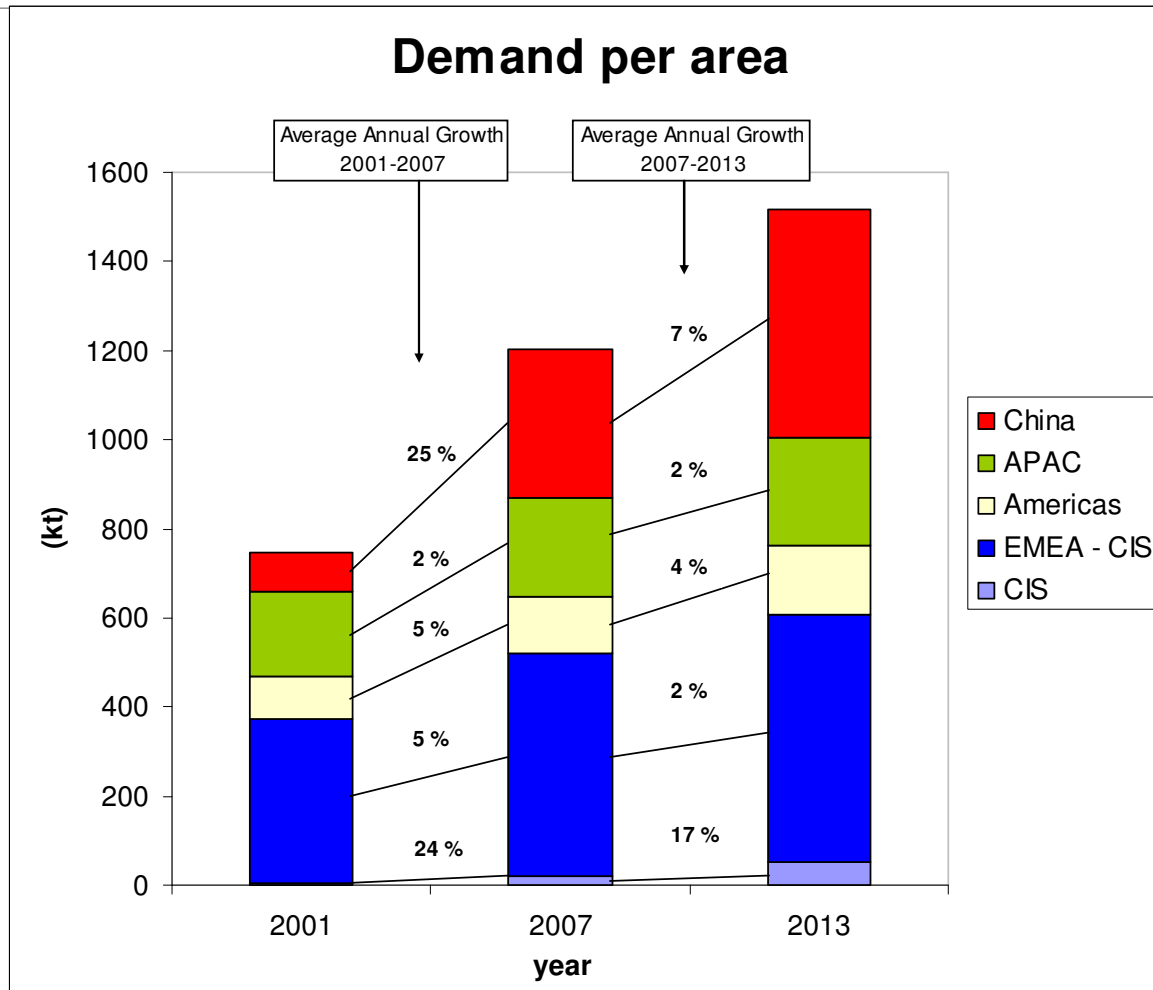
September 5, 2007.



- Introduction DSM Melamine
- The demand outlook
- Margins since 2002
- The China factor
- Melamine producers
- Types of producers
- Capacity expansion outlook
- What will DSM do?
- Supply / demand outlook :  
a self denying prophecy?

- 40 years of history in the melamine business
- leading positions in key markets at key customers
- significant market shares worldwide
- frontrunner in melamine technology
- Stamicarbon urea technology

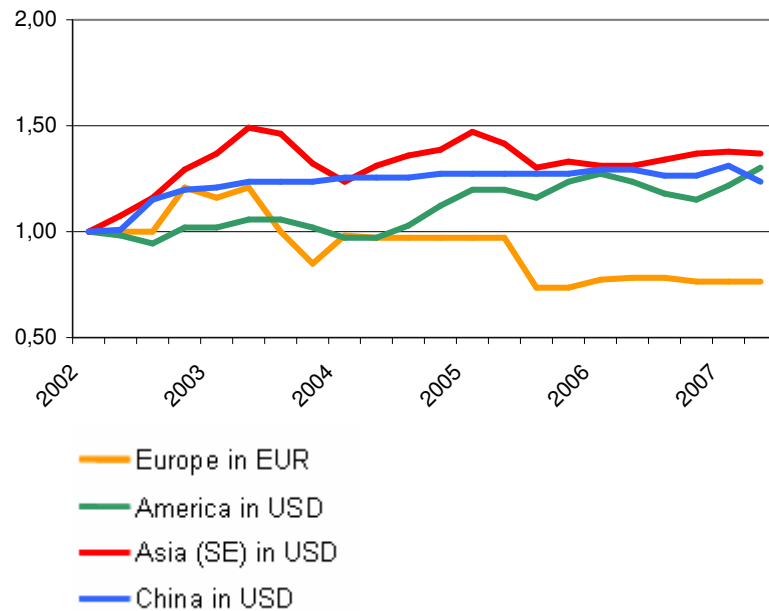
# Demand growth is healthy, China accounts for more than 50% of growth.



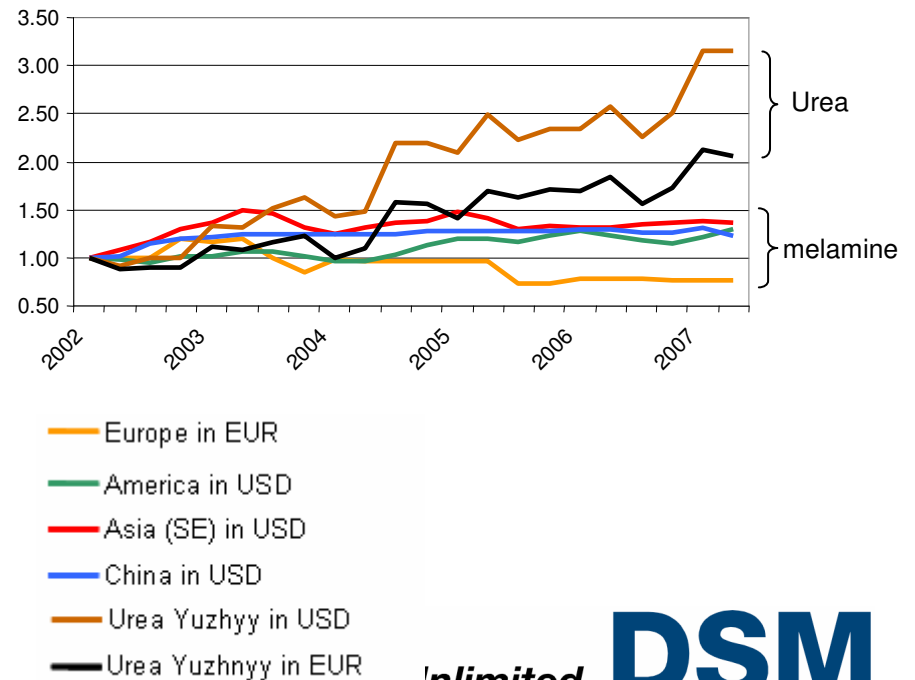
# Melamine margins poor since 2003

- Raw material cost increase not transferred to customers.

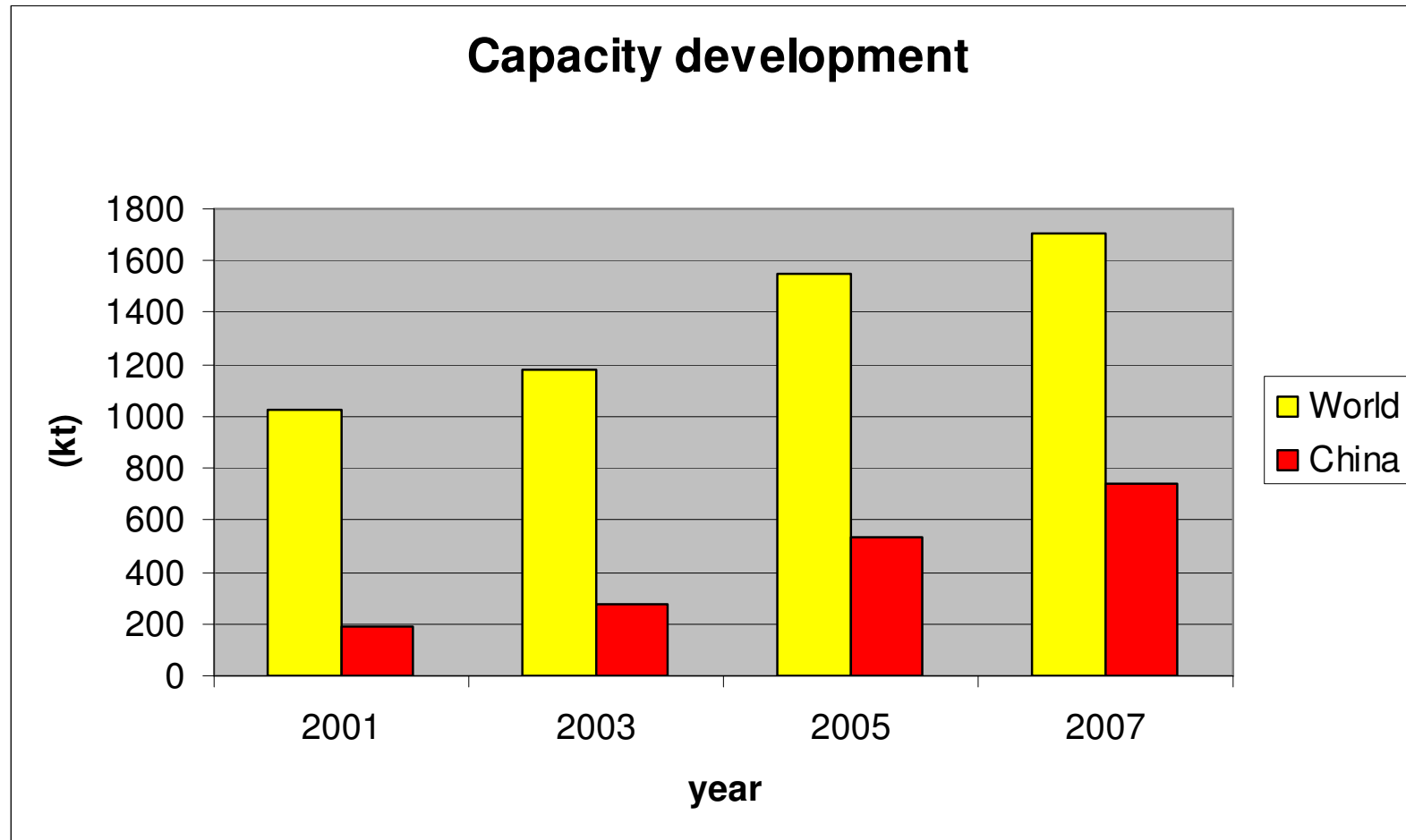
### Melamine price indices



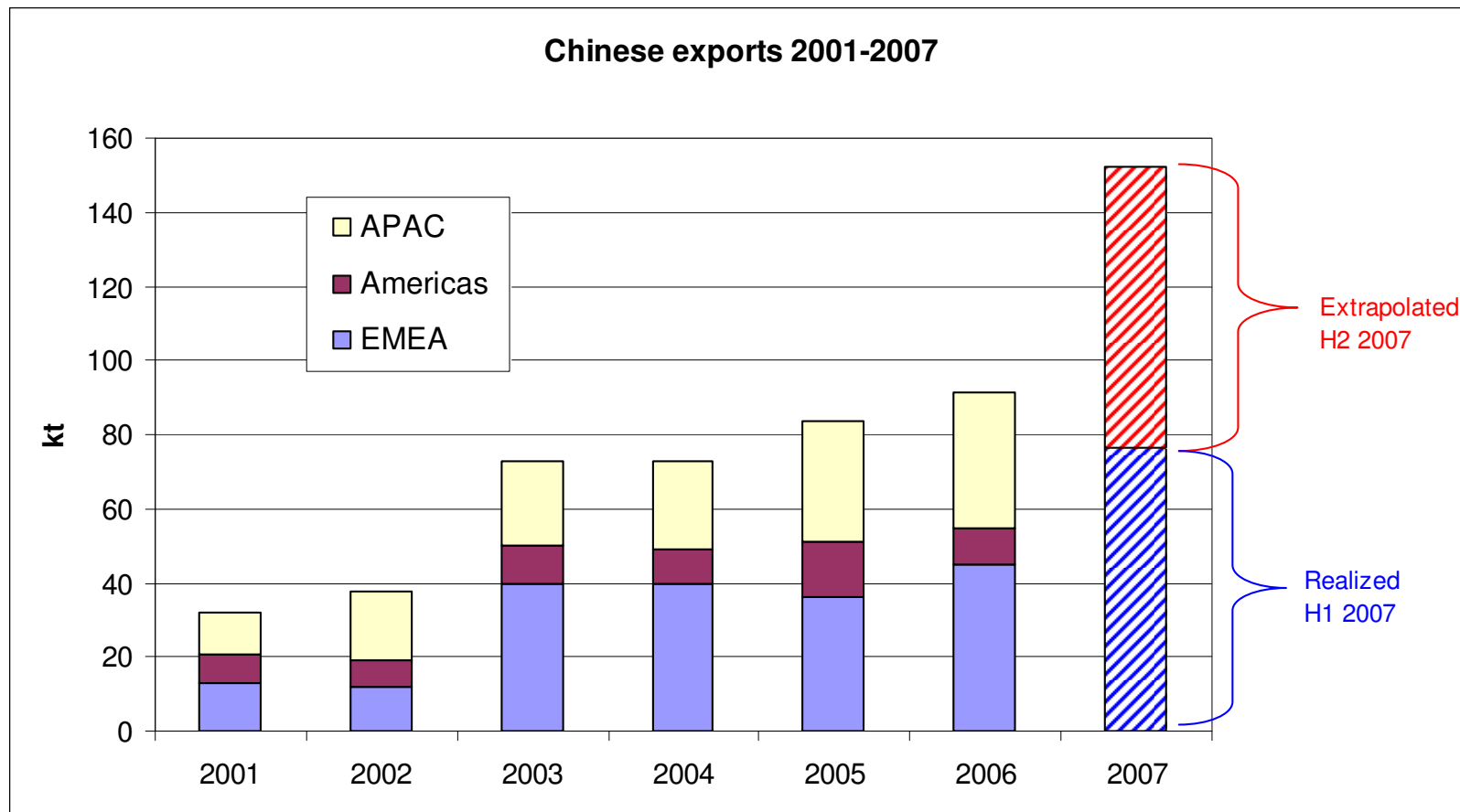
### Melamine and urea price indices



# Huge increase in capacity, especially in China



# Melamine exports from China are increasing.



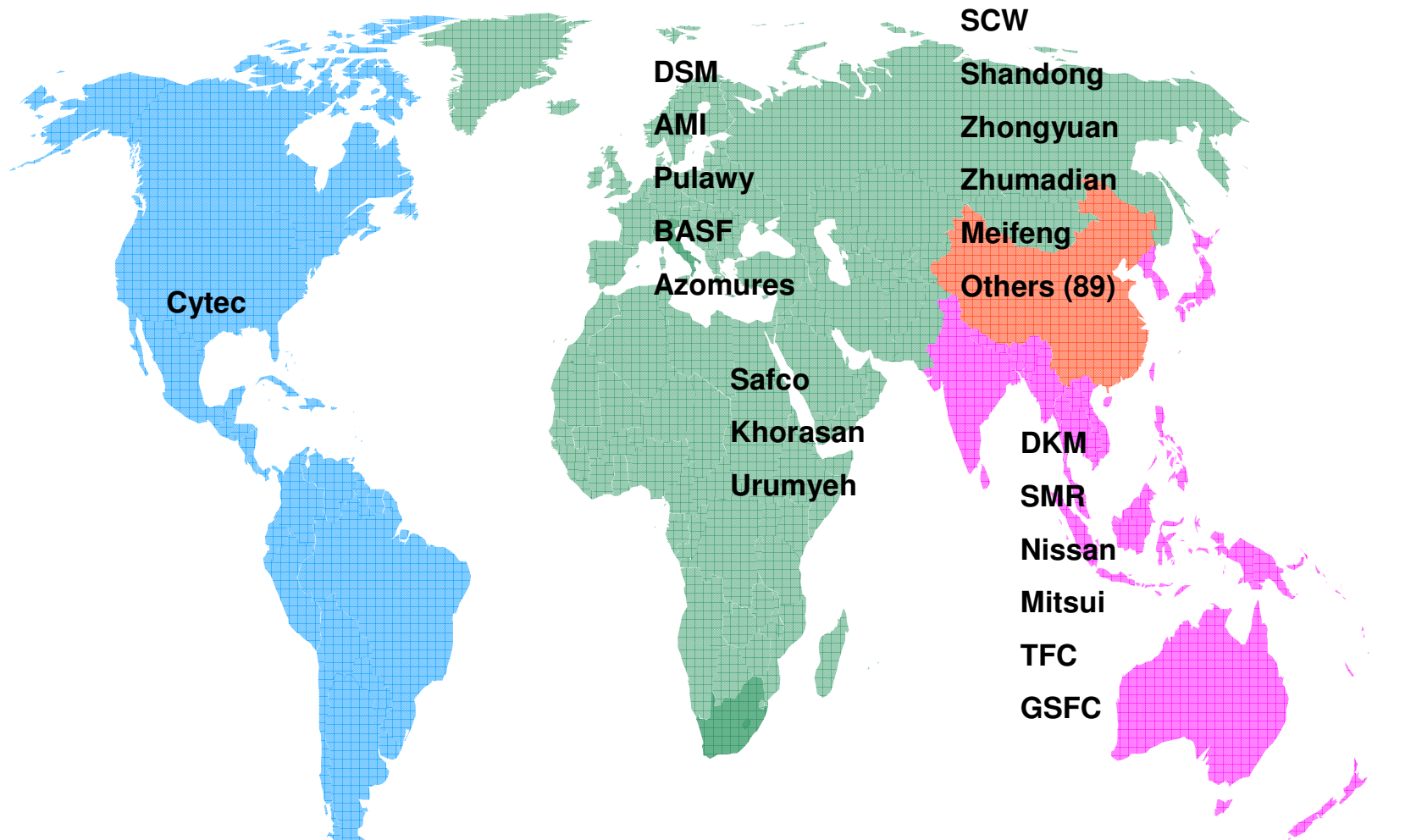
- Extrapolation of first half year export statistics indicates 150 kt in 2007

Melamine by DSM™

Moscow September 2007

Unlimited. **DSM**

# Melamine producers in 2007



Melamine by DSM™

Moscow September 2007

Unlimited. **DSM**



- Long term gas prices for new projects 1 - 1,50 \$ / MMBTU
- Very competitive in “gas intensive” products NH<sub>3</sub>+urea, methanol, LNG.
- No local melamine market, so export oriented
- Competitiveness in melamine on delivered basis?
  
- Move into melamine often for political reasons.
  
- Firm projects for new melamine plants in
  - Trinidad, 60 kt (+ 60 kt)
  - Qatar, 60 kt,
  - Abu Dhabi 80 kt
  
- Others may follow.

- Different model
  - Very small plant scale, low investment.
  - Too little attention for Safety Health Environment.
  - Urea subsidized to support farmers.
  - Utility prices at local conditions.
  - Allocated fixed cost and depreciation often ignored.
  - Soft financing.
  - Varying product qualities.
- Cost advantages will eventually decrease
  - Growing SHE awareness
  - Pricing of natural gas and urea will move to international market prices
- But for the time being: Chinese model survives.

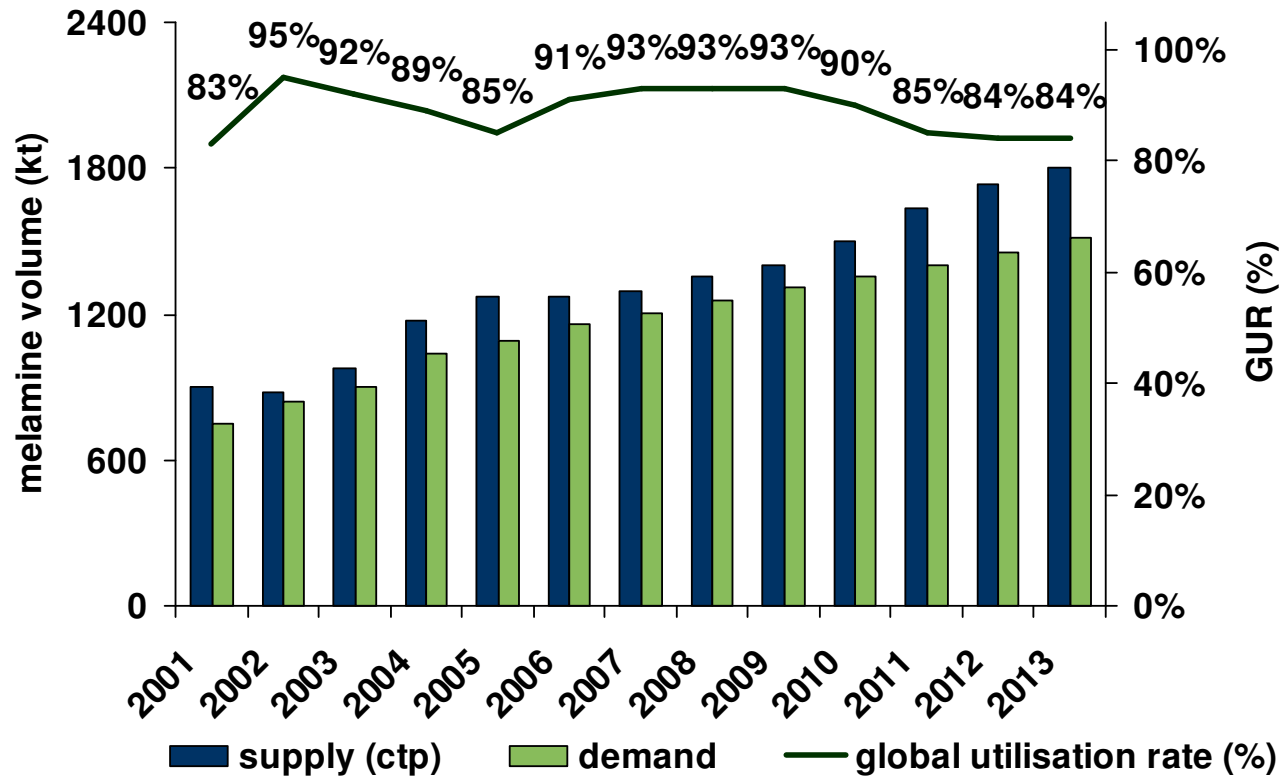
- Built to serve local customers.
- Small plant scale, up to 30 kt
- Protection from import duties gradually disappearing
- Quality of technology and product not always up to standard
- Built when gas prices were not differentiating.
- New reality of gas markets makes cost positions unsustainable
  - Closures in Taiwan, Korea, Japan, USA
  - India, Romenia under pressure
- Strong sentiment for new “local for local projects” remains in Brazil, Russia, Ukrain, Belarus, India, Turkey

- DSM 's criteria for a feasible project
  - Long term secured low gas price
  - World class technology
    - energy efficiency
    - optimal urea/ melamine integration
    - scale
  - Investment / tonne
  - Location with low transportation cost to world markets
  - Timing
- Currently announced projects do not meet all criteria

- Innovate, bringing value to the business chain.
- Serve customer base and enter into fast growing regions.
- Contribute to a better informed, more professional business community.
- Extend technological leadership in urea melamine combination
  - Shortened Liquid Phase technology
  - Upfront design combined with Stamicarbon urea plant
- Secure sources to meet demand from growing customer base and innovation efforts.

# Supply demand balance

Trendline based on announced projects: "a self denying prophecy?"



- Future melamine demand growth in line with GDP
  - Margins have eroded due to overinvestment in China
  - Market is tightening 2007-2008
  - Wave of new capacities 2009 -2013 in gas countries M.East and Trinidad
  - Chinese will continue to expand, regardless...
  - Many “local for local” projects around the world, regardless...
- 
- The unprecedented oversupply in 2009-2013 is no longer a self-denying prophecy but a base case.