

JM

REFORM CMS



Johnson Matthey
Inspiring science, enhancing life

Improving performance with advanced reformer balancing technology

Why balance a reformer?

A poorly balanced reformer can compromise production, energy consumption, NOx emissions and tube life.

What are the characteristics of a well-balanced reformer?

- uniform process gas temperatures exiting each tube
- uniform flue gas conditions
- uniform tube metal temperatures
- lowest energy consumption

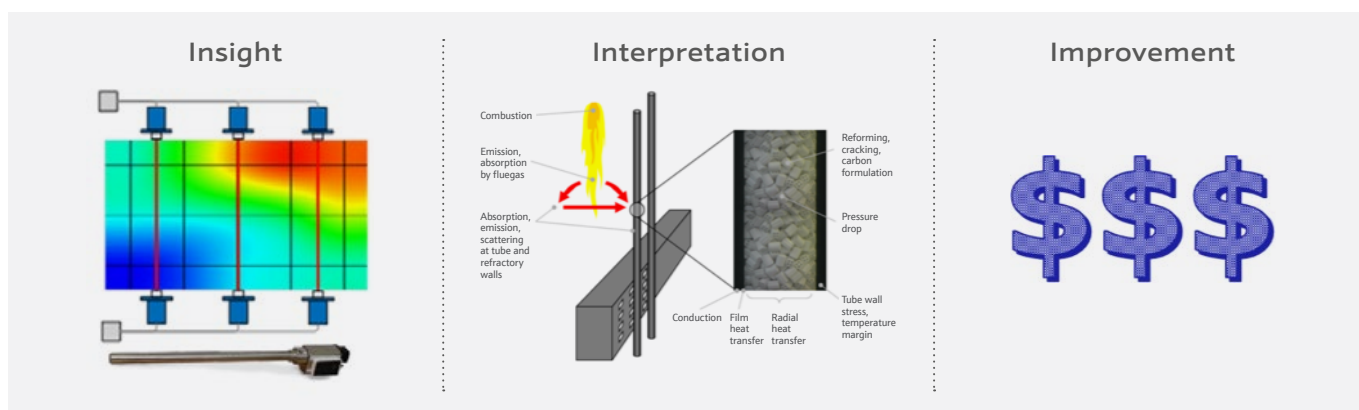
What are the problems with conventional balancing?

- intermittent
- focussed on tube temperatures
- relies on manual measurements and operator experience
- rarely repeated after rate changes, trips, catalyst ageing etc
- requires continuous effort to maintain the benefit

What is the best way of balancing a reformer and keeping it balanced?

Johnson Matthey's **REFORM CMS** uses advanced measurement techniques to provide better **INSIGHT**, advanced modelling expertise to **INTERPRET** data and remote monitoring to ensure sustained **IMPROVEMENT**.

- **INSIGHT**
 - Advanced measurement techniques
 - Reformer imager for tube metal temperature
 - TDLAS for flue gas temperature and composition
- **INTERPRETATION**
 - JM's advanced **REFORM** modelling capability, developed over many years as a catalyst supplier and designer/licensor of steam reformers, is used to analyse data and generate focused recommendations which allow plant operators to balance a reformer
- **IMPROVEMENT**
 - A remote monitoring interface is used to monitor the reformer and allow balancing to be repeated as often as necessary (shiftly, daily, weekly) thereby allowing sustained improvement.



Billingham, UK
Tel +44 (0) 1642 553601
www.matthey.com

For further information on Johnson Matthey, please contact your local sales representative or visit our website.