

JSC Mozyr Oil Refinery, Republic of Belarus
Technology licence, BEDP and Terrace Wall™ reformer supply for a 22.4 mmscfd natural gas-fed plant.

Khabarovsk Refinery OJSC "Oil Company Alliance", Russia
Technology licence and BEDP for a 27 mmscfd mixed feedstock plant.

East European Refinery
Technology licence, BEDP, catalyst supply, detailed engineering and Terrace Wall™ reformer supply for a 22 mmscfd natural gas and LPG-fed plant.

Middle East Refinery
Technology licence and BEDP for a 73 mmscfd natural gas and LPG-fed plant.

European Refinery
Full EPC scope and Terrace Wall™ reformer supply for an 11 mmscfd plant.

BOC Gases, North Tees, UK
Full FEED and EPC scope and Terrace Wall™ reformer supply for a 36 mmscfd plant.

NIS, Serbia
Technology licence and BEDP for a 42 mmscfd plant.



Foster Wheeler - setting an industry standard for hydrogen and syngas production



the right people with a
'can do' attitude and the
commitment to deliver

Hydrogen Production

Concept to Construction

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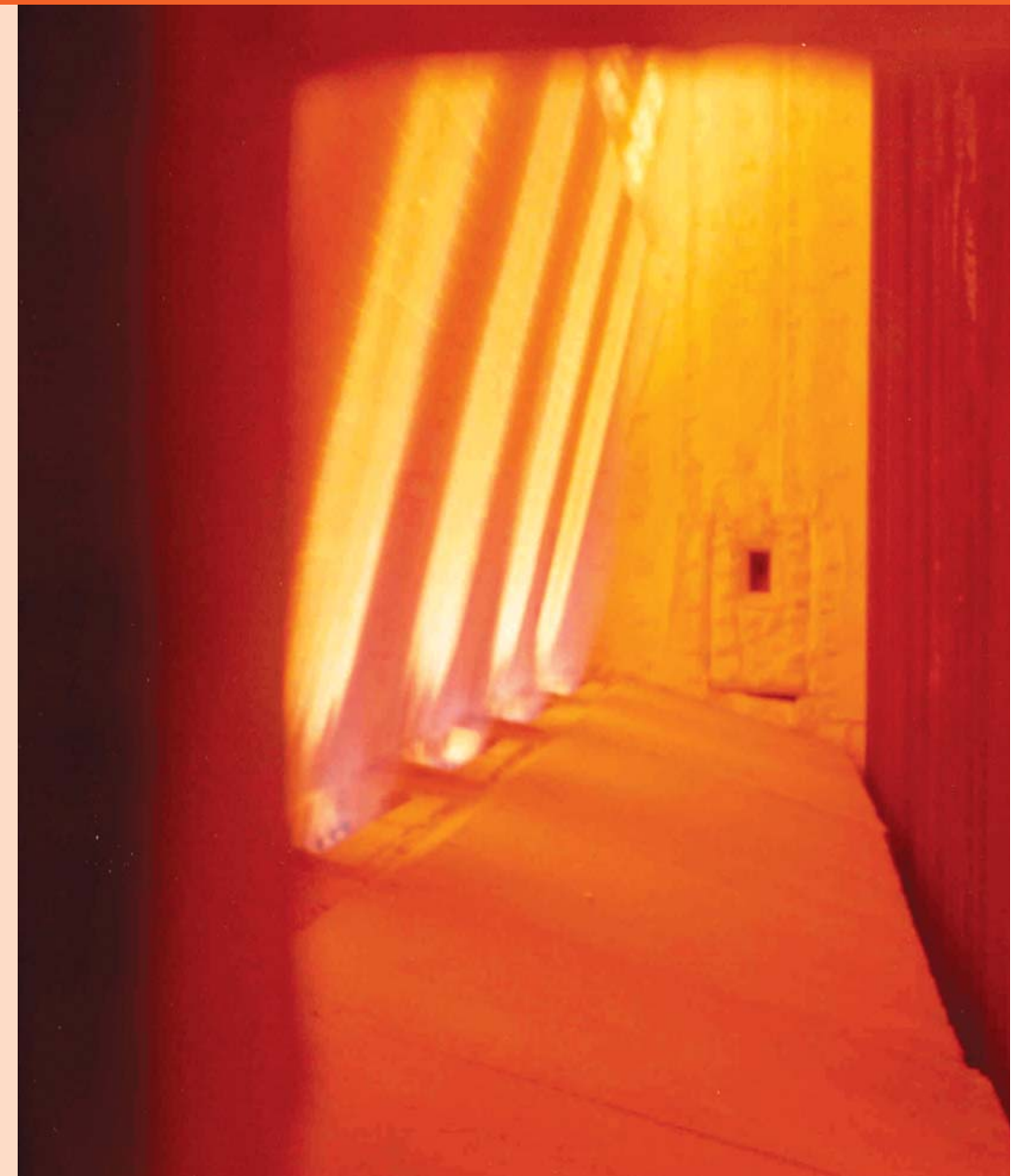
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Meeting your hydrogen needs

Did you know.....

- We provide studies, licensed packages, FEED and EPC as a one-stop shop
- We have supplied over 200 of our Terrace Wall™ reformers world-wide
- We accommodate **all** major catalyst suppliers, thereby achieving maximum flexibility for our clients
- We offer modular design of our reformers

At Foster Wheeler, we work hard to ensure we maintain our global reputation for world-class project execution by completing projects on schedule, within budget and with no compromise on safety or quality.

- **Market research and strategic studies**
- **Master planning**
- **Feasibility studies**
- **Front-End Engineering**
- **Engineering, procurement and construction services**
- **Project management**
- **Environmental engineering**
- **Commissioning**
- **Operations and maintenance management**
- **Training**

Creating value

Today's refineries face the tremendous challenge of meeting an increasing demand for cleaner transportation fuels, as specifications continue to tighten around the world, and markets decline for high-sulfur fuel oil.

We have the track record to help our clients address their resultant increased hydrogen demands cost-effectively.

We have designed, engineered and constructed over 100 hydrogen and synthesis gas plants with a total installed capacity of over three billion scfd.

But we don't only focus on building new plants. Because we have significant experience and expertise in optimizing and revamping existing hydrogen systems, we help our clients find the lowest-cost route to meeting their hydrogen needs.

Our extensive experience, gained through integrating our technology with catalyst suppliers and hydrogen purification systems, enables us to provide our clients with optimum solutions.

We provide innovative ideas and solutions to reduce refinery costs

Hydrogen management studies

- Identification and optimization of hydrogen distribution network
- Use of hydrogen recovery technologies to maximize availability and minimize capital investment
- Multiple feedstock, utility and steam options
- Economic evaluation of solutions
- Optimization of new plant capacity

We are a leading supplier of hydrogen technology

Licence and basic engineering packages

- Experience of multiple feedstocks ranging from natural gas to naphtha
- Flexible technology solutions including pre-reforming
- Cost-effective opex solutions based on feedstock/utility value
- Optimized plot spacing and constructability

We offer revamp solutions to minimize capital investment

Revamps / Debottlenecks

- Capacity creep solutions
- Reformer revamps including thermal performance enhancements
- Hydrogen purification options
- Compression system optimization
- Processing additional feedstocks - natural gas, LPG, naphtha
- Addition of pre-reforming

Major player in steam reformer technology

With our own in-house teams of Fired Heater experts, we design and build all reformer types including our proprietary Terrace Wall™ reformer

Foster Wheeler's Terrace Wall™ design uses sloped radiant sidewalls to ensure uniform controlled heat input into the catalyst tubes, thereby offering:

- Uniform heat flux distribution
- Low-NOx burners
- Optimized burner configuration
- Flexibility to operate on natural draft
- Radiant section modular construction
- Long tube and catalyst life
- Adjustable heat flux
- High efficiency
- Minimum plot space
- Safe, reliable operation



RIGHT PEOPLE, RIGHT EXPERTISE