

Growth without limits

What are the ramifications now for the API tube markets?



James Ley - Consultant
Hatch Beddows

Contents

- **Hatch, Hatch Consulting and Hatch Beddows**
- **The large-diameter LSAW line pipe markets**
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Our organisation

- Hatch supplies business, process and technology consulting, design and engineering and construction, operations and project management to the mining and metals, energy and infrastructure industries worldwide
- Established 1955 and employee owned
- 8000 highly skilled people serving clients worldwide
- US\$16BN of projects now under management in 60 countries

Our values

- Safety
- Quality
- Innovation
- Sustainable development
- Effective risk management

We deliver unprecedented and sustained results for our clients

Global reach and resources

8000 people



Hatch Consulting is the leading management consultancy dedicated to the mining and metals industries

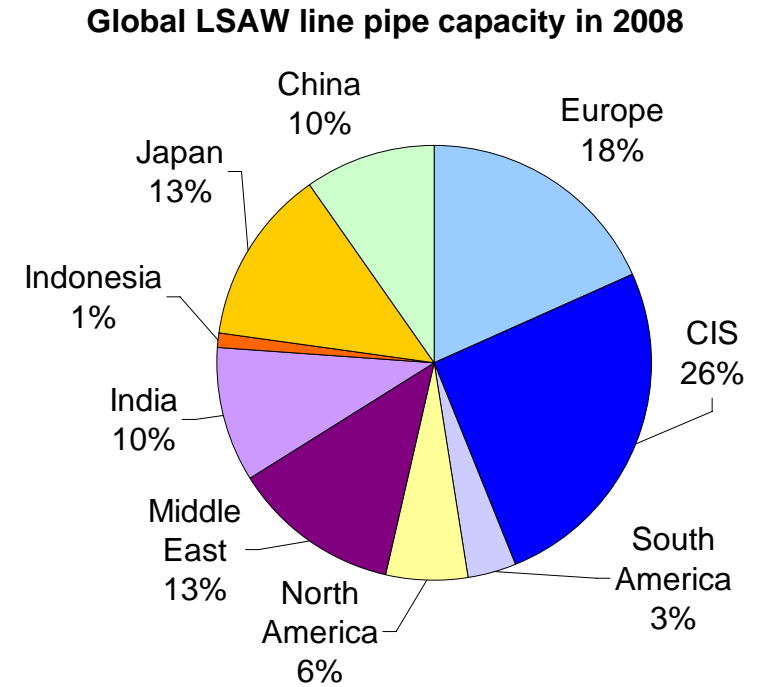
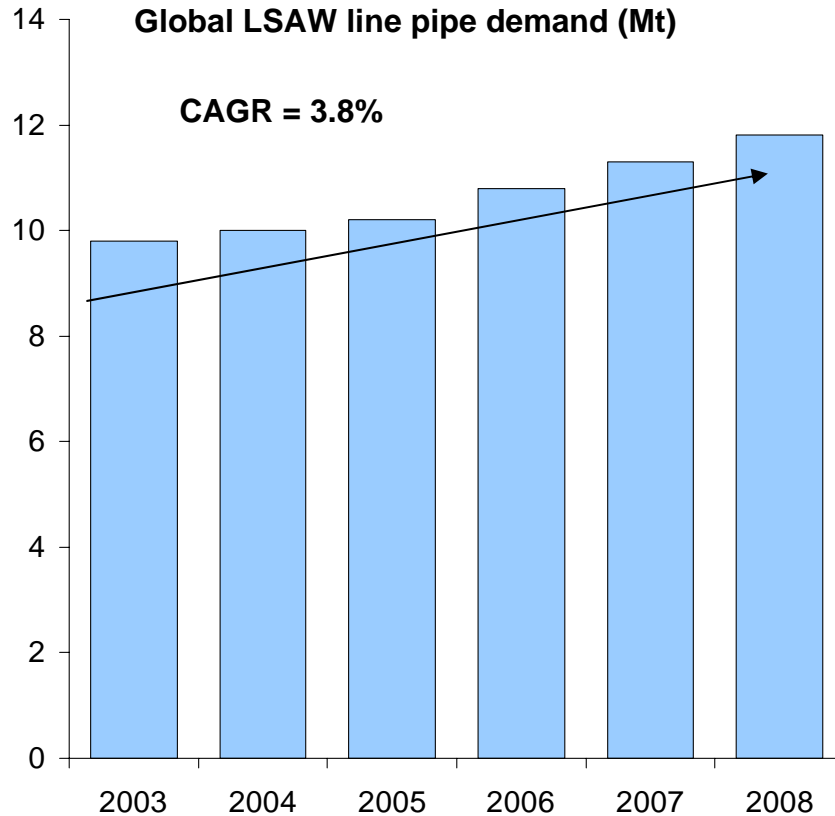
- **Hatch Consulting** is the world's leading management consultancy specialising in the mining and metals industries and provides high level support services, ranging from corporate and business strategy development through strategic market studies to implementation of new technologies, management and operating practices
- Hatch Consulting is organised into specialised practices by industry and service, combining to provide precise solutions, expertly delivered to the exact needs of each individual client
- **Hatch Beddows/Hatch Management Consulting** is the strategy and market development practice, specialising in steel and raw materials, and providing strategy development and implementation services
- **Investment and Business Planning** (IBP) provides economic, environmental and technical evaluations of minerals properties and processing facilities, due diligence, pre-feasibility and feasibility studies and related investment planning and appraisal services
- **Hatch Corporate Finance** a FSA-regulated joint venture company, provides corporate financial advisory and transaction execution services

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THE LARGE DIAMETER LSAW LINE PIPE MARKETS

Global LSAW demand has continued to rise into 2008, but capacity growth is outpacing this, and there is extra theoretical capacity in the market of nearly 6Mt



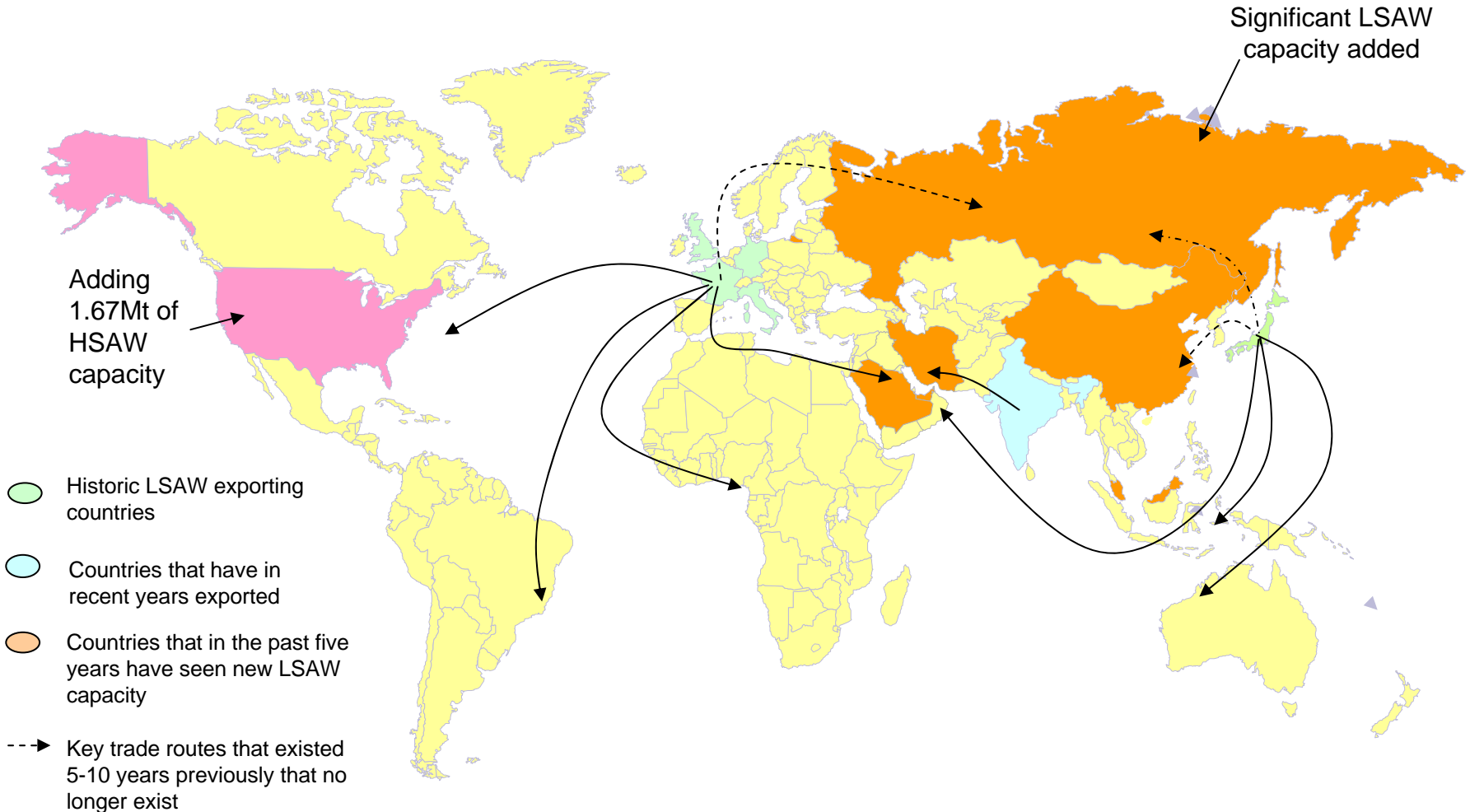
2007 Capacity	16.7
2008 Capacity	17.5
CAGR 07 - 08	4.8%

Source: Hatch

THE LARGE DIAMETER LSAW LINE PIPE MARKETS

Europe and Japan are seeing traditional LSAW export markets decrease as domestic LSAW capacity rises in the Middle East, Asia and rapidly in Russia

Overview of some key global LSAW trade routes



In 2007 the Middle East had a major shortage of LSAW supply, with North America also registering a slight shortage - Europe and other Asia (primarily Japan and India) had a major local over-supply of LSAW pipe

Estimated supply/demand balance for LSAW worldwide in 2007 (Mt)

	LSAW capacity	Estimated LSAW demand	Maximum* Surplus/Deficit
Europe	3.2	1.10	+2.1
N. America	1.1	1.55	-0.45
S .America	0.6	0.4	+0.2
CIS	3.7	2.45	+1.25
Middle East/Africa (incl. Turkey)	2.2	3.5	-1.3
China	1.7	0.9	+0.8
Other Asia	4.4	1.4	+ 3.0

•This maximum capacity would assume a 100% utilization rate at all HSAW/LSAW tube mills – this utilization rate is never achieved

Numbers in Red illustrate markets with a major surplus in capacity of line pipe, numbers in blue illustrate markets with a major deficit

Russia's excess capacity for primarily LSAW line pipe is forecast to increase by ~ 1Mt by 2014, the country will follow India to begin exporting LSAW pipe, OMK's Viksa is leading the way by winning a project in Nigeria

Planned capacity expansions for Russia's large-diameter line pipe mills

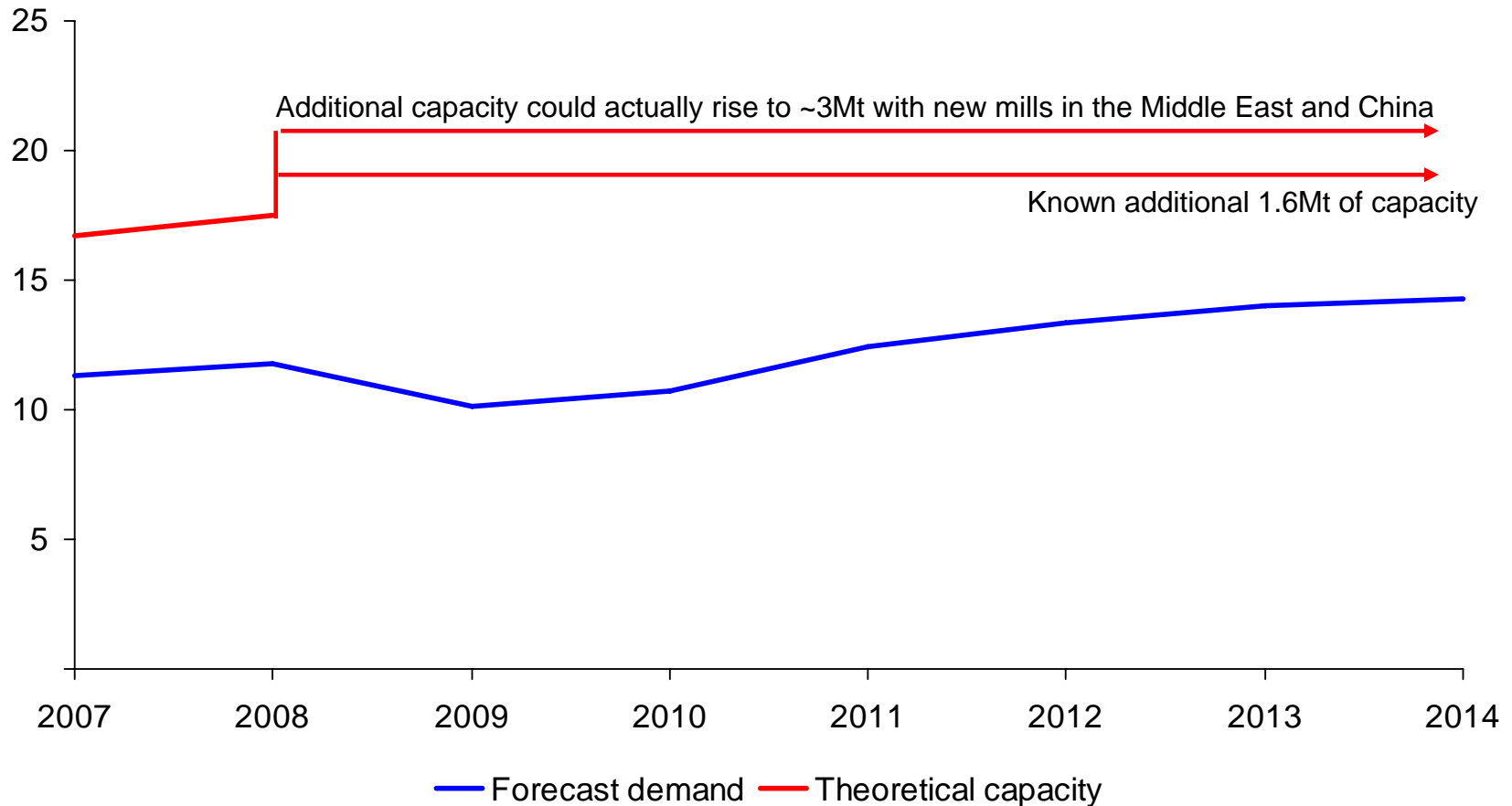
Group	Mill	Type	Diameter (mm)	Wall thickness (mm)	Capacity (kt)							
					2008	2009	2010	2011	2012	2013	2014	
OMK	Viksa	LSAW	508-1067	7-26	1012	1012	1012	1012	1012	1012	1012	1012
OMK	Viksa	LSAW	508-1420	2-48	950	950	950	950	950	950	950	950
ChTPZ	Chely	LSAW	530-820	2-12	250	250	250	250	250	250	250	250
ChTPZ	Chely	LSAW	1020-1220	10-16	450	450	-	-	-	-	-	-
ChTPZ	Chely	LSAW	508-1420	-38	-	700	700	700	700	700	700	700
TMK	Vol'sky	HSAW	530-2520	7-25	650	650	650	650	650	650	650	650
TMK	Vol'sky	LSAW	508-1420	6.4-42	-	585	600	625	650	650	650	650
Severstal	Izhora	LSAW	610-1420	12-36	550	600	600	600	600	600	600	600
Total capacity					3,862	5,197	4,762	4,787	4,812	4,812	4,812	4,812
Russia's large-diameter pipe consumption forecast					2,217	1,261	1,663	1,911	2,101	2,162	2,193	2,193
Forecast excess capacity					1,645	3,936	3,099	2,876	2,711	2,650	2,619	2,619

Source: Hatch

THE LARGE DIAMETER LSAW LINE PIPE MARKETS

With additional LSAW capacity also expected in the Middle East, and potentially China, there is likely to be a softening in the supply/demand balance in the next couple of years

Forecast demand and supply of LSAW line pipe to 2014 (Mt)



Source: Hatch

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Russia is likely to be increasingly seen in the export market at a time when the supply/demand balance is set to soften creating an even more competitive market for European, Japanese and Indian exporters

- New LSAW capacity is expected on stream in 2009 from Russia and the Middle East
- The LSAW market is likely to see a loosening of the supply/demand balance in the next couple of years, which over the past few years has been tight
- Russian LSAW capacity growth has been sensational, and based on forecast demand excess capacity in that market could be around 2.6Mt compared to the current 1.6Mt
 - Russian LSAW mills are now starting to look to the export market and this trend is likely to continue. Infrastructure logistics in Russia are likely to need to be developed though
- The Middle East, a traditional export ground for European and Asian exporters, is building LSAW mills, primarily roll bending facilities. Hatch expect further LSAW mills to be announced in the region in the coming years increasingly reducing this regions reliance on imports

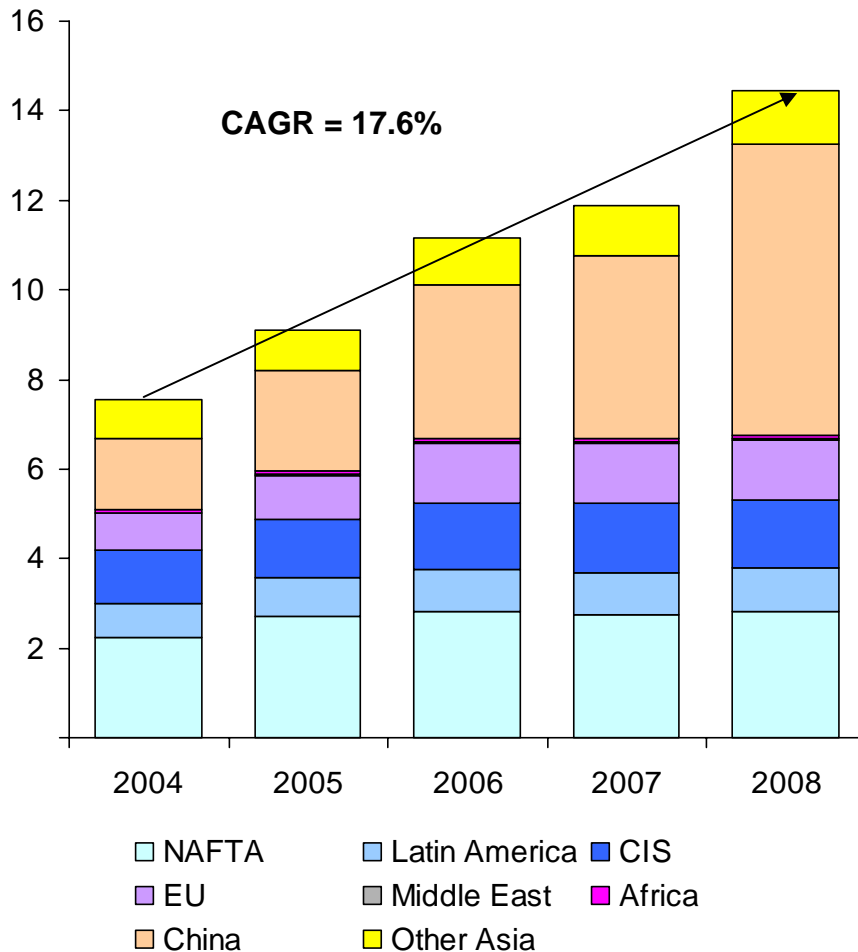
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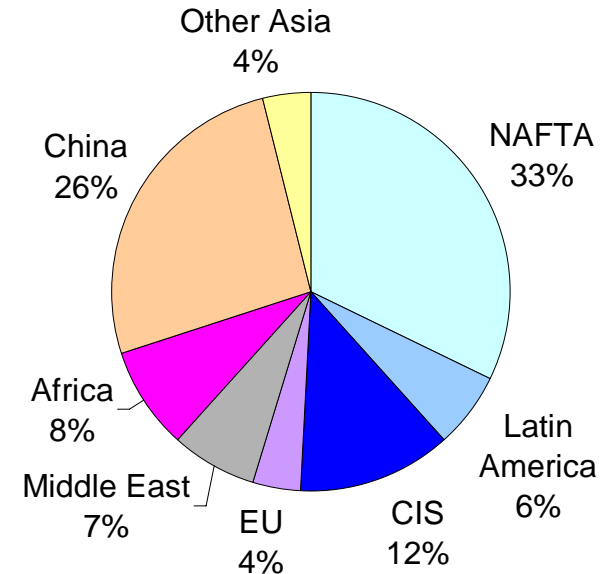
THE SEAMLESS OCTG MARKET

Global OCTG production has increased rapidly in the last five years, with China driving this. China, itself, has been unable to keep its consumption growing at the pace of its production

Global seamless OCTG production (Mt)



Global seamless OCTG consumption in 2008 (%)



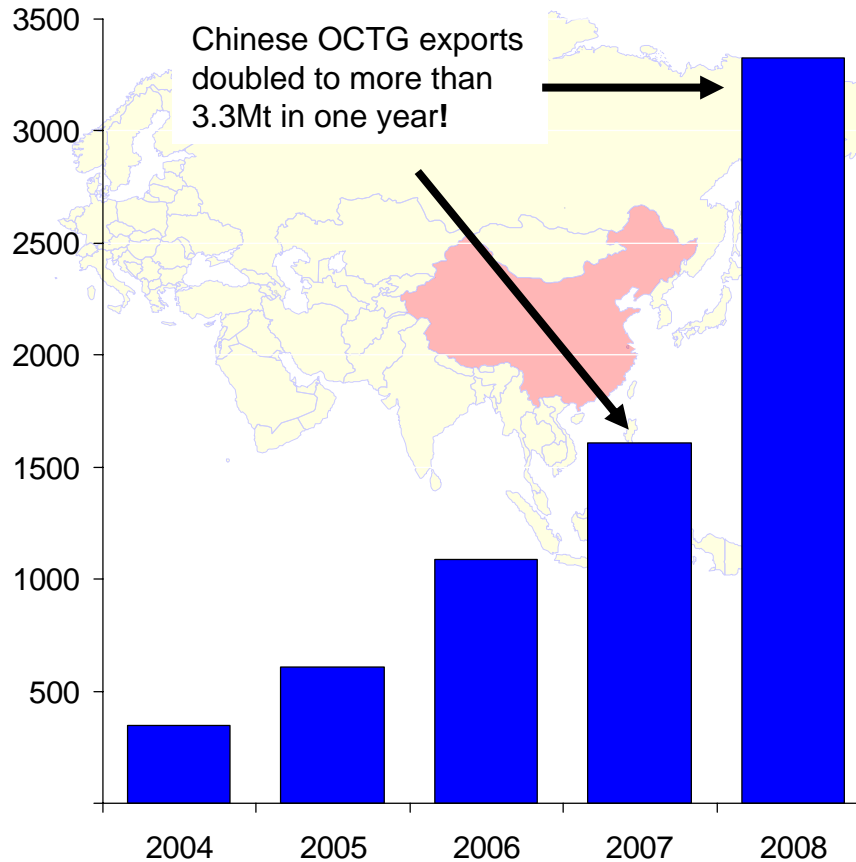
Production in 2008	14.5M tonnes
Consumption in 2008	12.8M tonnes

Source: Company interviews and Hatch offices in Beijing, Pittsburgh and London

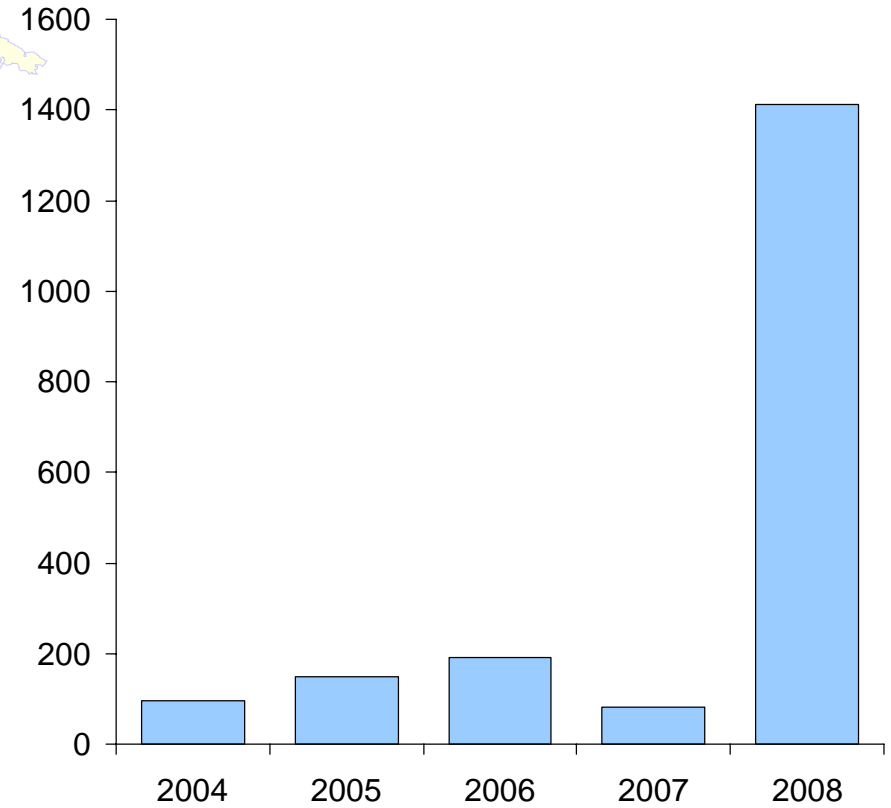
THE SEAMLESS OCTG MARKET

In 2008 this led to a significant calculated over-supply of seamless OCTG in the global market as China's seamless OCTG exports doubled to 3.3M tonnes!

Chinese exports of seamless OCTG (kt)



Estimated surplus of seamless OCTG in the global market (kt)



While it appears that the commodity market at least for seamless OCTG entered significant over supply in 2008, new capacity is still expected particularly in China

Forecast new seamless tube capacity coming on stream that could focus on seamless OCTG

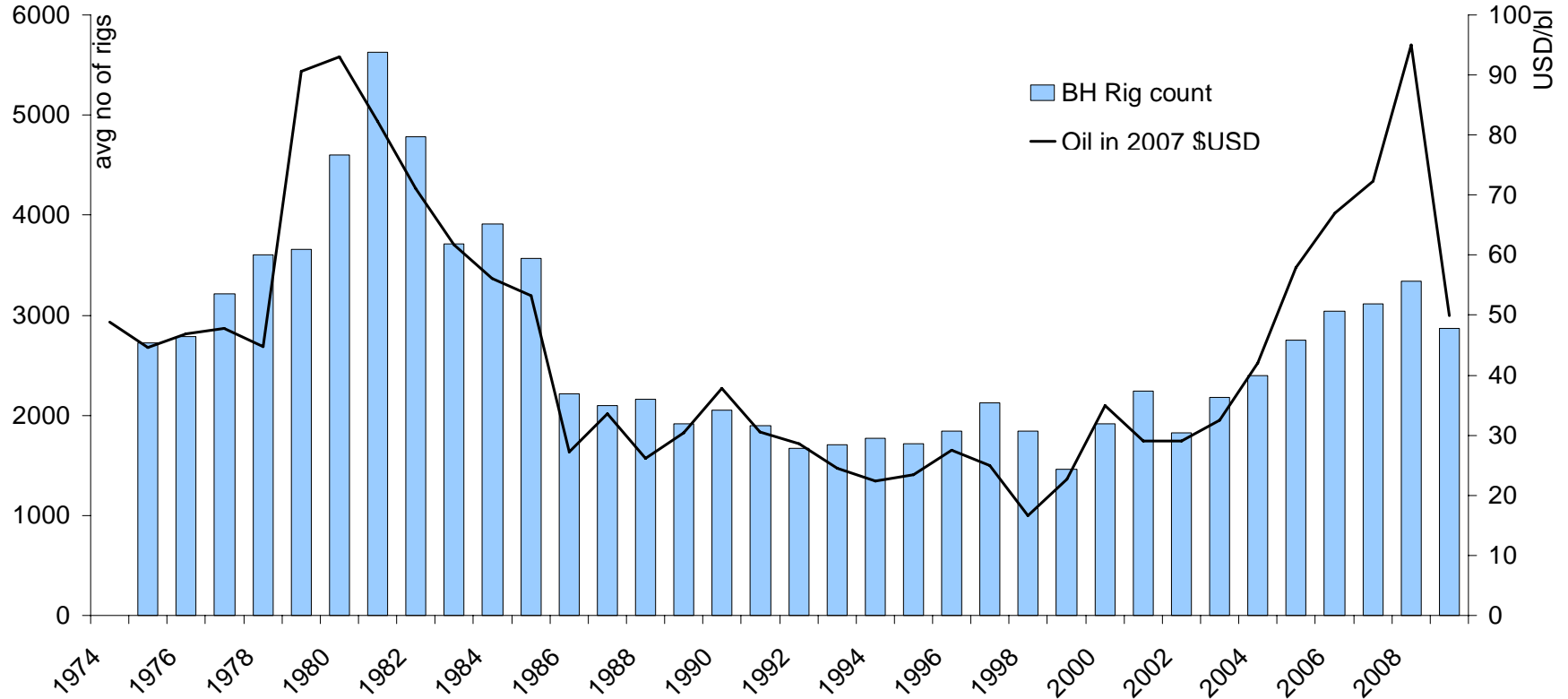
Producer	Location	Capacity (kt)	Expected product focus	Start-up date
V&M do Brazil	Brazil	600	Priority – OCTG Also line pipe	2010
JESCO	Saudi Arabia	400	Priority – OCTG Also line pipe	2009
ArcelorMittal	Saudi Arabia	600	Priority – OCTG Also line pipe	2010/2011
Tenaris	Veracruz, Mexico	450	Priority – OCTG Also line pipe	2011
TPCO	Texas, USA	550	Priority – OCTG Also line pipe	Dec. 2010
Multiple Mills	China	4,400	Range of products not just OCTG. 11 new seamless mills currently planned – 6 have start-dates, 5 unknown	
Total capacity		6,700		

THE SEAMLESS OCTG MARKET

The number of drilling rigs which heavily drives demand for seamless OCTG is heavily correlated with oil prices

Rigs are down overall in number as efficiency of drilling improves and wells get deeper to reach more difficult reserves including directional drilling from the same rig to access fields which in the past would have required separate vertically driven wells. All this allows more meters per rig

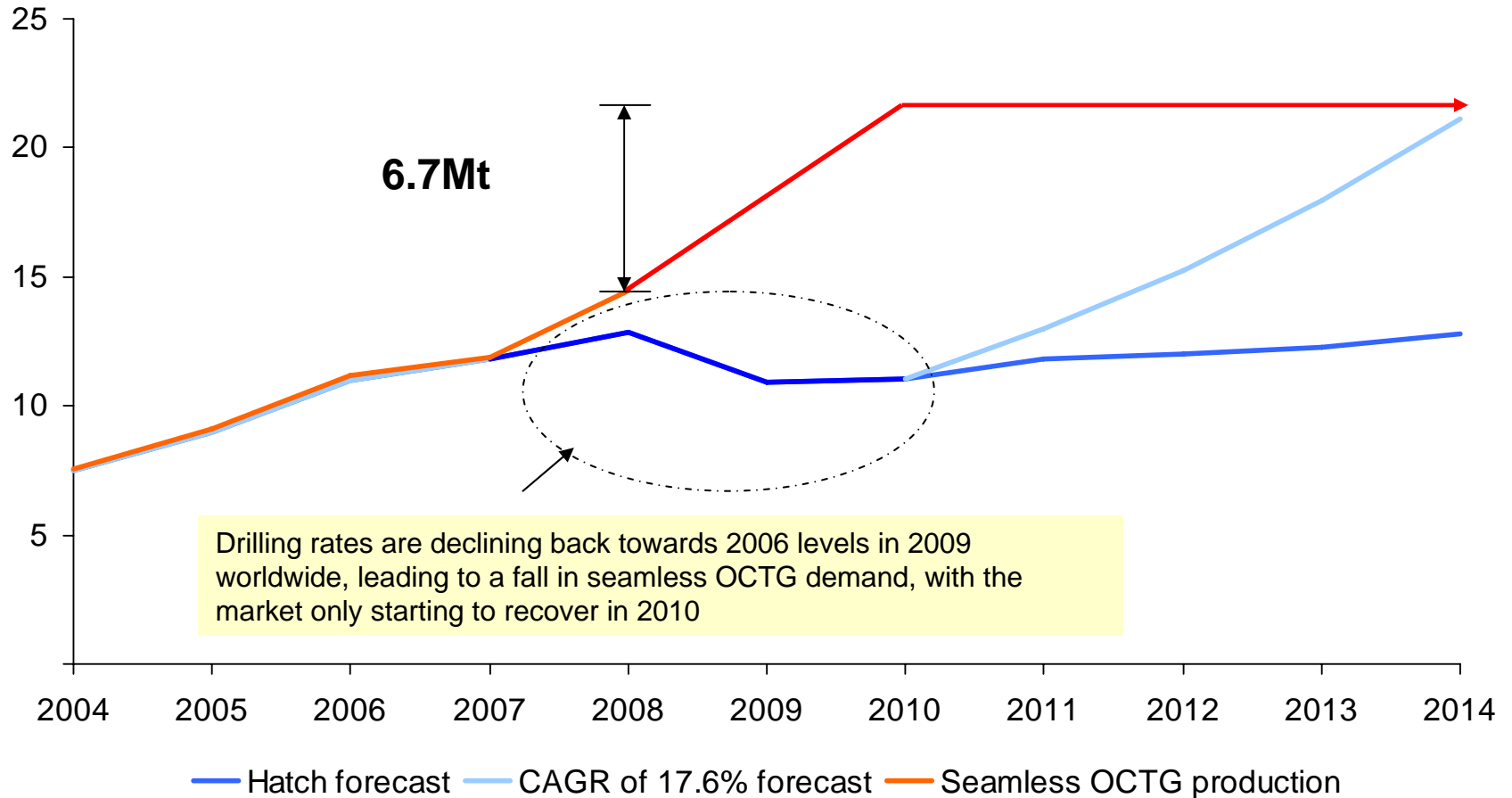
Oil Price vs Average Number of Rigs



THE SEAMLESS OCTG MARKET

The seamless OCTG market would have to return to its rapid growth rates between 2004-2008 to begin to be able to absorb the proposed new seamless OCTG capacity currently slated

Forecast supply/demand of seamless OCTG tubing/casing until 2014 (Mt)



Source: Hatch

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The commodity seamless OCTG market has moved into surplus in 2008 and it's difficult to see how this will ease through to 2014. The proprietary market is better protected, but China and others could soon compete here also

- **Commodity seamless OCTG grades** (e.g. non heat-treated API 5CT J/K 55) have already moved into over-supply driven by Chinese exports
 - This market is likely to continue to remain in surplus through to 2014 if all of the proposed new Chinese mills go ahead
 - Markets that have been recipients of seamless OCTG such as the USA are likely to introduce dumping duties to Chinese material to limit the damage to their domestic market
 - The Middle East and the CIS will receive rising seamless OCTG exports from China. These markets are traditionally strong markets for European, CIS and Japanese exporters, but NOC/IOC's in these regions will have to approve Chinese mills
- Chinese mills to date are not posing such a significant threat in **proprietary seamless OCTG grades** (e.g. API 5CT P110 and Q125, Sour service, 13% Cr, high collapse etc.)
 - Growth in the OCTG proprietary markets will outpace the commodity markets as drilling conditions become more challenging
 - Leading Chinese OCTG seamless mills are starting to develop proprietary capabilities and while they are not expected to flood this market, there is likely to be increased competition

Thank you for your attention. For further information, please contact:



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