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Pipe & Tube Market – some influencing factors on the present situation

Dr. Gunther Voswinckel – Update as per June 2018

At the end of June 2018, oil prices climbed to a 2 year high of 77 US\$/barrel. Compared to 2016, the price of oil had significantly recovered in 2017 and this trend continues in 2018. This is on the one hand a consequence of reduced oil pumping by OPEC and their partners by about 1.8 Mio. barrel/day, and on the other hand due to the increased world market demand for oil. However, prices remain volatile and some US experts are even warning that the current situation bears similarities to the first shale gas flood offensive in 2014, when oil prices plummeted from 110 US\$ down to 30 US\$/barrel.

The International Energy Agency (IEA) backs up its warnings with figures. The IEA expects oil consumption growth in 2018 of about 1.4 million barrels/day. At the same time it expects that non-OPEC countries, particularly the US, will raise their oil pumping levels by about 1.7 million barrels/day. Citigroup analysts are even predicting a hike in output by the non-OPEC producers of about 2.2 million barrels/day. If the IEA and Citigroup are correct in their assumptions, the world could face an oversupply of oil, with attendant consequences for the tube and pipe industry.

However, despite these assumptions oil prices continue to climb, due largely to recent action taken by the US government. Since US President Trump announced further sanctions on oil-producing giants Iran and Venezuela, including measures to shut down oil exports, the world market has reacted to fears of a new shortage of oil and the upward trend in oil prices continues. Meanwhile, it is remarkable how the US oil and gas industry is taking advantage of the political sanctions being imposed by the US government, and US exports have surged. In this presentation, several other economic consequences for the tube and pipe industry are discussed. Tube and pipe markets such as the automotive, building and construction industry are attractive market segments for our industry and we look at developments there.

World production of steel tubes in 2017 showed a slight increase of 1% as the markets stabilized. In detail, growth of 34% was reported for the US, supported by political trade barriers for tubular products and the strong growth of the shale gas exploration industry due to booming oil prices.

For welded tubes below 406 mm diameter, a small overall production decrease of 2 % was registered for 2017, although the US reported growth of 34 % after major losses (down 18 %) in 2016. In contrast, China registered a downturn of 10 %. For welded tubes of 406 mm or larger, 2017 production was down by 7 % overall. But Europe showed remarkable buoyancy and production growth of 47 %. For seamless tubes, 2017 saw production grow overall by 8 %. Even the US, after a moribund year 2016 (-22 %), reported an increase of 74 %.

Overall, the figures illustrate a remarkable change in trend, since now for the second time in several years, the shift of tube production capacity to China has been reversed in favor of the US and Europe. It would seem that the trade barriers policy is having an impact. Meanwhile, overcapacity is leading to further consolidation in the steel tube industry. The pipe price index, which rose from 260 in January 2017 to a high of 292 in January 2018, has con-

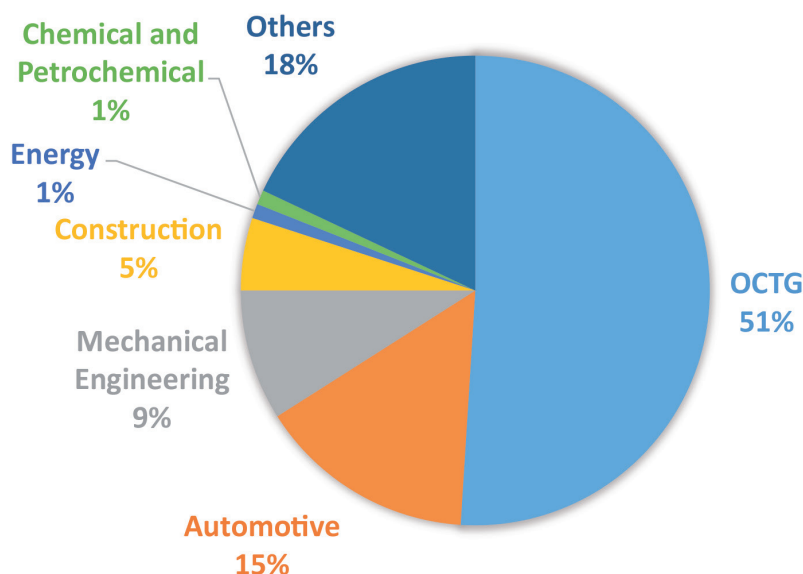


Fig. 1: Markets for Steel Pipe Industries in 2012
Source: ITAtube Journal/Wirtschaftsvereinigung Stahlrohre e.V.

tinued to climb steeply, achieving 332 in June 2018. Competition in saturated markets is prompting minor investments in those tube markets that display growth. More demanding high-tech products are the strategic targets, rather than commodity-grade tubes.

Tube suppliers located in high-cost countries are successfully taking steps to counter the strong international competition. As well as seeking to specialize in products with higher technical requirements, they are globalizing into markets with increased demand and streamlining their productivity to reduce production costs.

Finally, we also discuss the impact of currency exchange rates on the pipe market. Exports from the euro zone were favored in 2016, but the euro strengthened considerably throughout 2017 and into early 2018, which led to export disadvantages. Currently the European currency is falling again, improving export markets for eurozone products vis-a-vis other important currencies.

Looking at the main market segments for steel pipe suppliers, this market is dominated by the OCTG industry (51 %). Besides this, the automotive (15 %), mechanical (9 %) and construction industries (5 %) are also strong market segments for the sector (Fig. 1).

The automotive and construction markets in particular are characterized by stability and high demand.

World car production levels grew overall by about 1% in 2017 (Fig. 2). Regionally, growth rates differed considerably, with growth in Europe (+3 %), Asia (+3 %, dominated by China at +7.4 %) and particularly the Mercosur market

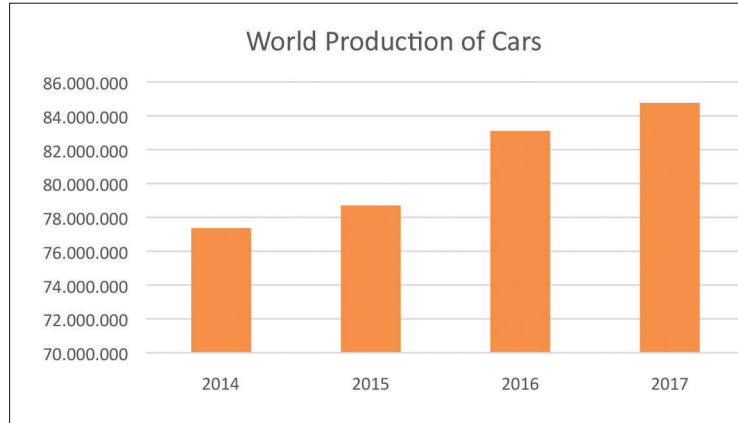


Fig. 2: World car production 2014-17

Source: German Association of Automotive Industry (VDA), June 27, 2018.

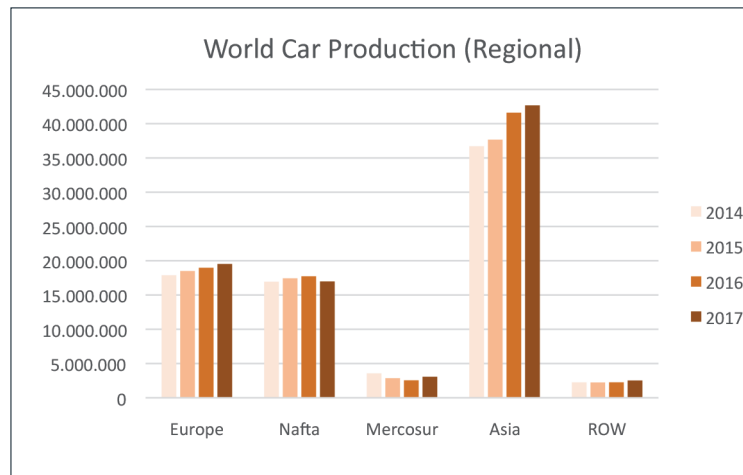


Fig. 3: World car production by region 2014-17

Source: German Association of Automotive Industry (VDA), June 27, 2018.

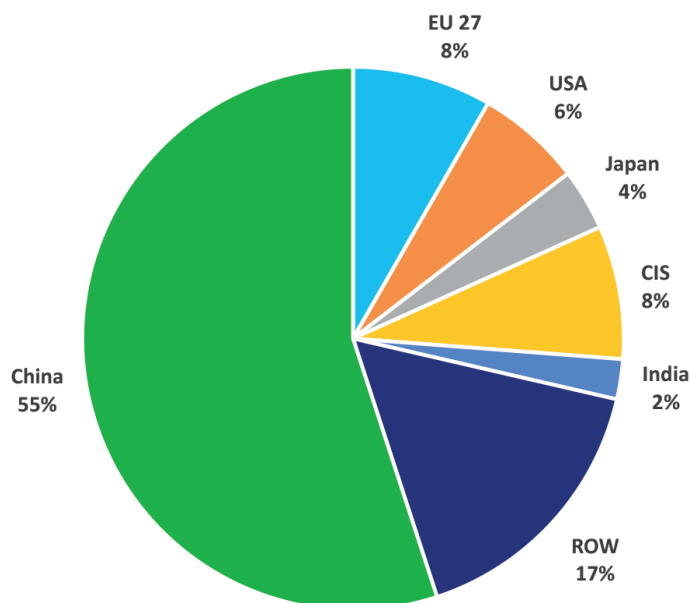


Fig. 4: Global steel tube production by region, 2017

Source: ITAtube Journal/Wirtschaftsvereinigung Stahlrohre e.V.

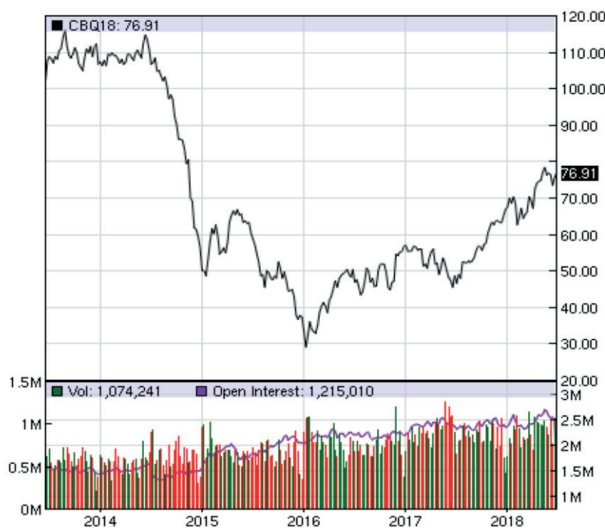


Fig. 5: Crude oil Brent price as per June 27, 2018. Source: NASDAQ

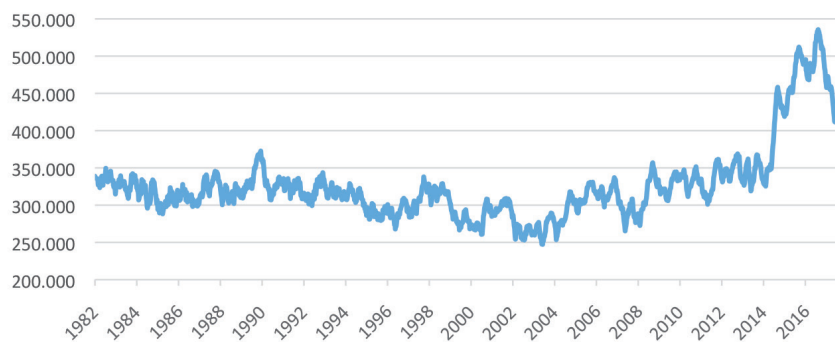


Fig. 6: US crude oil stock volume as per June 22, 2018. Source: EIA

Capital spending (■)

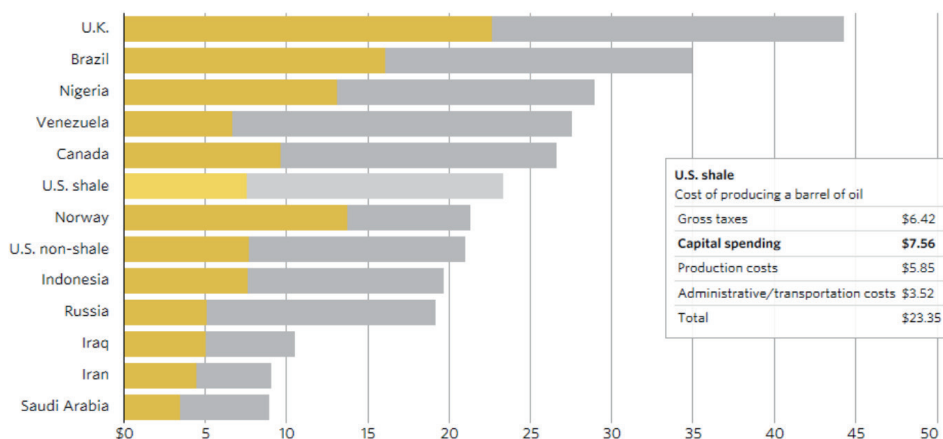


Fig. 7: Cost to produce a barrel of oil
Source: UCube by Rystad Energy, published Feb.16, 2018

(a surge of +20 % after 2 weak years); only the Nafta region showed a downward trend (-4 %) (Fig. 3).

The overall health – and hence attractiveness - of the auto market is amply illustrated by the remarkable growth of 16 % displayed by the German car production industry from May 2016 to May 2018. Since pipe usage in cars is growing in parallel, the automotive market is likely to remain an attractive market segment for pipe producers.

The tube and pipe market in the building and construction industry is smaller but nonetheless attractive due to a world industry growth of about 3.3 % per year (see also ITAtube Journal 4 2015). Urbanization and population growth are the driving factors here.

In 2017, world steel tube production was again dominated by China (55 %), followed by other/ROW (17 %) (Fig. 4). It is worth noting that China's market share was reduced by 3 % from 58 % in 2016 to 55 % in 2017. This was balanced by growth in ROW, EU27 (+1 %) and US (+1 %) market shares.

In 2014 the oil and gas markets were flooded by shale gas products. In the 2nd half of 2014, oil prices plummeted from 110 US\$/barrel to 36 US\$ in February 2016. Subsequently, they recovered overall somewhat, hitting 52 US\$ in August 2017 (Fig. 5), mainly thanks to the OPEC countries and their exploration partners reducing output to minimize the glut. By June 2018, oil prices had climbed to about 77 US\$/barrel.

Analysts were assuming another reduction in oil prices, reflected

in the fact that the crude oil stock volume in the US was recently reduced (Fig. 6). Normally if rising crude oil prices are expected, the storage volume increases, whereas falling crude oil prices lead to an erosion of the crude oil stock volume.

But in actual fact, the price of oil has continued to climb. This is thought to be a consequence of the US President's actions on the stage of world trade. Despite Mr. Trump's eruptions against the OPEC cartel price policy, the sanctions against Iran and Venezuela have caused a significant increase in oil prices. And the stipulation that no country in the world should import any more Iranian oil will simply continue to boost this trend.

Currently, Iran exports about 2.5 million barrels of oil every day. On November 4, 2018, the date that the grace period for Iran comes to an end, the country's oil exports could grind to a halt with further possibly significant effects on oil prices to be expected. Nonetheless, some countries such as Turkey have stated that they will not comply with Mr. Trump's request.

To counter possible shortages of oil in the world market, OPEC, led by Saudi Arabia, agreed to pump 1 million barrels more crude oil per day, with Riyadh agreeing to dip into its reserves "if and when necessary to ensure market balance and stability" – moves meant to help contain the recent rise in global energy prices.

It should be noted at this point, something we come back to later in this article, that the US shale gas industry as well as US tube producers have been quick to take

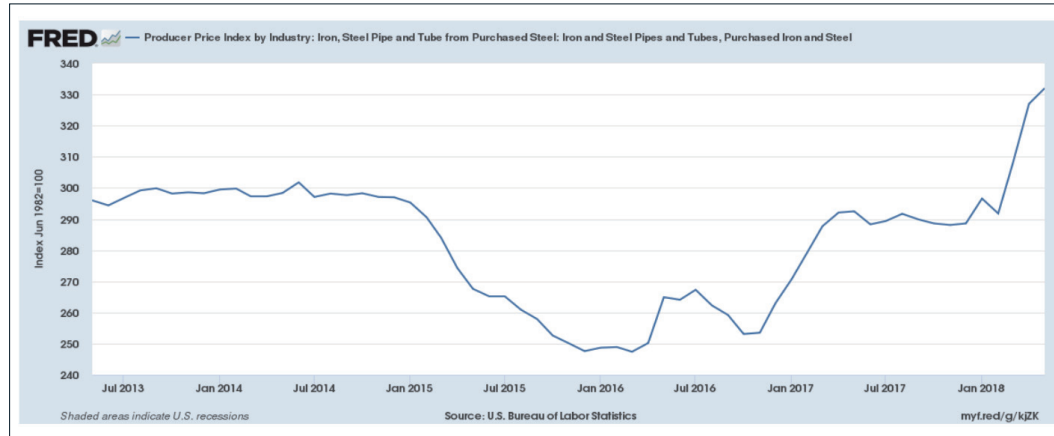


Fig. 8: Producer pipe price index as at August 11, 2017 (January 1982 = 100%)
Source: US Bureau of Labor Statistics/ Federal Reserve Bank of St. Louis

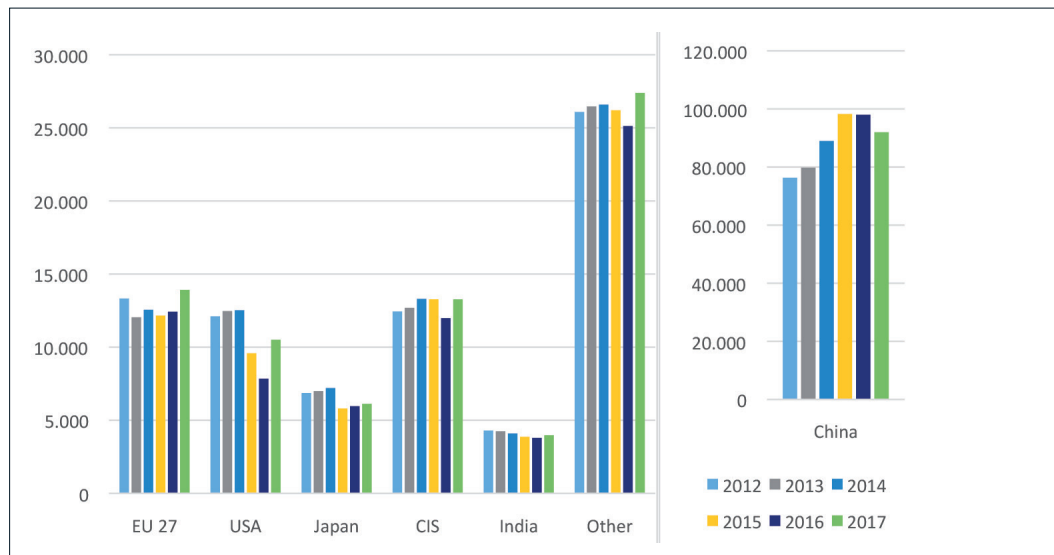


Fig. 9: World steel pipe production in Tons
Source: ITAtube Journal/Wirtschaftsvereinigung Stahlrohre e.V.

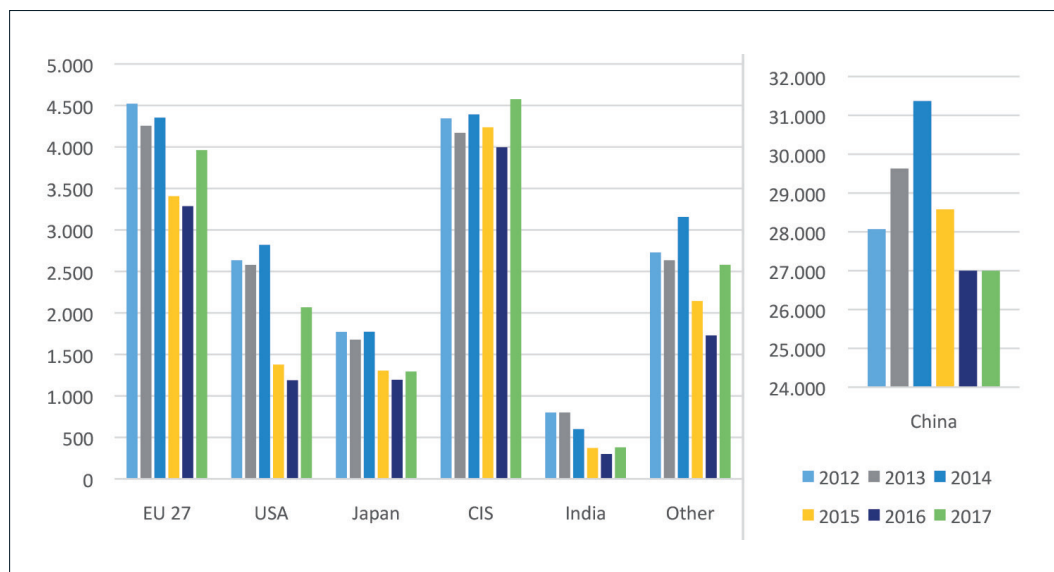


Fig. 10: World steel pipe production in Tons (seamless)
Source: ITAtube Journal/Wirtschaftsvereinigung Stahlrohre e.V.

advantage of the political measures instituted by Mr. Trump.

Given that many oil-exploring countries have production costs ranging from 30-40 US\$, it is unsurprising that the industry reacts with the utmost sensitivity to current oil price developments (Fig. 7).

Moreover, the entire shale gas exploring industry, regarded in 2014 as a highly attractive industry segment, saw itself forced by previously low oil prices to further reduce its cost level to about 24 US\$/barrel (Fig. 7) – with the

result that its selling price is now much lower than the current price offered for crude oil by the market. In consequence, shale gas production was increased. It is to be expected that rising oil prices will affect a further shale gas boom.

The OPEC countries and some other partner countries such as Russia are currently reducing the oil volume offered to the world market by about 1.8 million barrels/day.

International Energy Agency (IEA) figures show it expects oil con-

sumption to increase this year by about 1.4 million barrels/day.

At the same time, it expects that non-OPEC countries such as the US will increase production by at least 1.7 million barrels/day.

Citigroup analysts are predicting a hike in output levels by non-OPEC producers of as much as 2.2 million barrels/day.

If the IEA and Citigroup are correct in their assumptions, the world could face an oversupply of oil, with attendant negative consequences for the tube and pipe industry. However, this oversupply could well be canceled out by the political sanctions initiated by the US government against Iran and Venezuela.

As a consequence of oil prices soaring, pumping of oil and gas and exploration activities were restarted. This had an immediate effect on OCTG pipe consumption, particularly in the US. Since January 2017, the pipe price index had climbed by about 36 %, or from 244 to 332 (Fig. 8). The positive signals in 2017 had also prompted traders to begin cautious restocking. The renewed boom in prices (77 US\$/barrel by June 2018) continues to have positive effects on the tube and pipe index.

These pipe price corrections certainly left their mark on the world steel pipe production (Fig. 9). 2016 was considered a no growth year. In 2017, global tube production increased slightly (1 %). Looking at regional statistics, it is notable that only China (-4 %) displayed a downturn in pipe production. All other regions increased their production figures (US +34 %, EU +12 %, CIS +13 %, ROW +9 %, India +5 %).

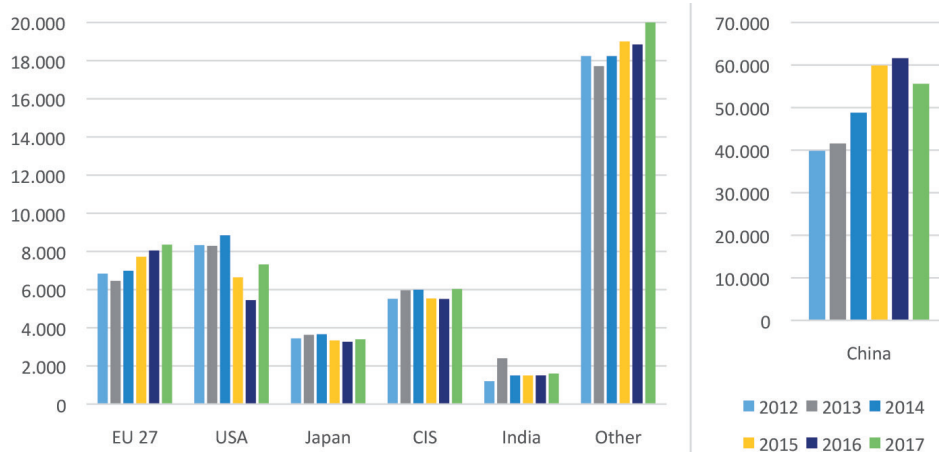


Fig. 11: World steel pipe production in Ttons (welded < 406 mm OD)
Source: ITAtube Journal/Wirtschaftsvereinigung Stahlrohre e.V.

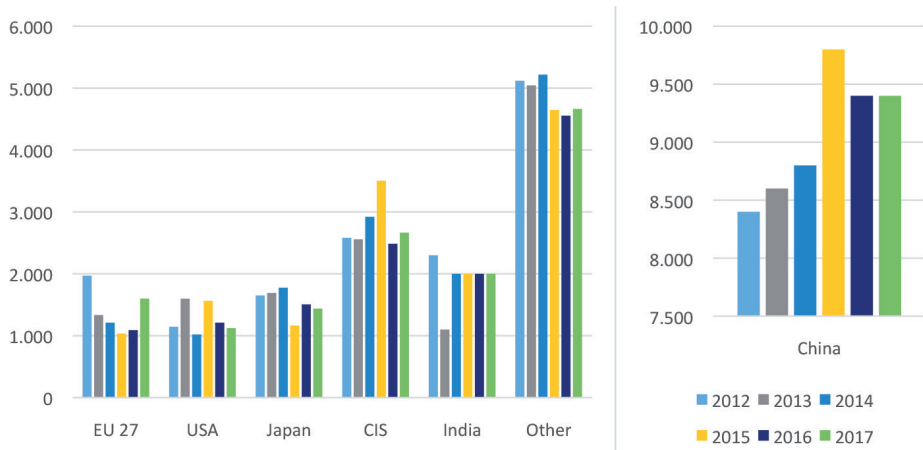


Fig. 12: World Steel Pipe Production in Ttons (welded ≥ 406 mm OD)
Source: ITAtube Journal/Wirtschaftsvereinigung Stahlrohre e.V.

The most significant variations were seen in the market segment seamless pipes and tubes (Fig. 10). Global production volumes increased by 8 % in 2017, dominated by the US (+74 %), other territories/ROW (+49 %), India (+27 %), EU (+21 %), and CIS (+15 %). China with the largest production volume did not increase its market share.

The production of welded pipes < 406 mm OD saw a slight global production volume decrease in 2017 (-2 %). China once again reported the most significant decrease (-10 %). All other regions reported an upturn in production volume: US (+34 %), CIS (+10 %), India (+7 %) and Europe (+4 %) (Fig.11).

The figures for welded pipes ≥ 406 mm OD, large diameter line pipe, also show an overall production decrease of 7 % in 2017, most marked in the US (-7 %) – although new US import tariffs on line pipe imports have had their desired effect and have slowed the downturn on home markets. The negative trend reflects the decreased demand for pipelines in these regions. The pipeline market is dominated by large projects, which are mostly politically driven. Europe, on the other hand, increased production (+47 %) and has further strengthened its position as a technologically advanced producer of large diameter line pipe (Fig. 12).

In the entire scenario, currency exchange rates have also had a significant impact on pipe exports and pipe manufacturing machinery exports throughout the world.

From the second half of 2014, the euro lost about 20 % against the US Dollar (US\$) (Fig. 13). Then, in 2016, it managed to hold its



Fig. 13: Currency exchange rates vs euro as per June 27, 2018
Source: Finance.net



Fig. 14: Currency exchange rates vs euro as per June 27, 2018
Source: Finance.net

value against the US\$ at around 1.07. Throughout 2017 until February 2018, the euro strengthened against the US\$ by about 17 % to 1.25. Since then it has dropped again by about 7 %, which has helped to lessen the pressure on exports into the US.

In 2017, the exchange rate of the euro to the Chinese yuan also improved, by about 7 %. In early 2018, it fell again by about 5 % - thus helping to balance out the export advantages enjoyed by China.

The value of the Russian rouble remained relatively stable in the latter half of 2017 at a level of about 70 roubles/euro. This meant that local pipe producers

to a large extent served the home market, to compensate for export losses. So far in 2018, the rouble has strengthened by about 8 % against the euro (Fig. 14).

From January 2017 (4.0) to February 2018 (4.7), the exchange rate of the euro to the Saudi Arabian riyal (SAR) gained about 18 %. This meant that imports from Saudi Arabia to Europe became significantly less expensive, although since then the riyal has dropped again by some 6.5 %.

As indicated by these latest figures, US tube and pipe producers in particular have greatly profited from the political climate created by the US government and the resultant business trends on

the oil market. Increased pumping and exploration activities are the primary driving forces of the market's recovery in the US. If we believe the US experts, this trend will continue throughout 2018. And to a lesser degree European tube and pipe producers were also able to profit from these developments.

What measures are pipe producers and plant equipment suppliers taking to overcome current difficulties and to generate sustainable business? Over-capacity is leading to consolidation in the steel tube industry. Several pipe producing companies are still looking into overcoming such capacity problems by closing production facilities with a questionable economic future.

Still, despite the remarkable boom in the US, globalization into markets with increased demand remains one of the key answers.

The Middle East and locations with major automotive production are to be considered. Besides this, shale gas exploration, deep-sea offshore exploration and oil sand exploration remain major challenges for our industry.

Price competition from China and elsewhere demands further specialization in high-tech products. This applies in particular to regions with high production costs. The producers seem to have evaluated their market approach and decided to serve commodities or high-tech products even if they only represent niches. Some countries/regions have also installed trade barriers to limit imports from other countries.

Finally, every producer has to make permanent improvements to increase productivity and reduce production costs. Technology suppliers may find interesting business opportunities in this field.

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- Global network of tube & pipe engineers
- Publisher of ITAtube Journal with information on latest market development
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