

# High Performance Copper strips for better connection solutions

## EDITORIAL

Dear readers,

It's been a busy first quarter from the business standpoint and the outlook for the second quarter is looking good too, especially for automotive, one of the key market segments for KMD in China. Therefore, hoping to stimulate your mind with some insider-information, our cover article is about the Chinese automotive industry, the auto market outlook and about some ongoing technology macro-trends. We will be back to interviewing the protagonists of KMD Chinese venture, as we are very keen to continue reporting about the human aspect of this challenging project.

For this quarter, besides the market data, in our "technical focus" in page 2 you will find an insider description of something that is at the heart of KMD's quality vision: KMD Henan laboratory, a nearly one million euros investment, a great tool to support our business with industry-leading quality analysis and data.

We hope you will enjoy reading and looking at some of the amazing pictures we collected for you!

-- With all the best!

## Partners of KMD China

(List in no particular order)

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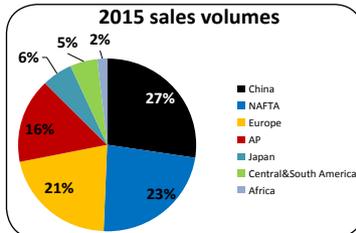
And counting....

## Market Movements

### China Automotive Market Focus

KMD has the ambition to become a major global player in the connector copper strips industry. For this reason, we are building a new manufacturing plant in Xinxiang, Henan province, PRC.

Automotive is one of the main application segment for connector strips and KMD is monitoring carefully this market's development, especially in China. In 2015 China confirmed to be the n.1 market for motorized vehicles, reaching a peak of 24,5 million vehicles sold and a global share of 27% (source: OICA).



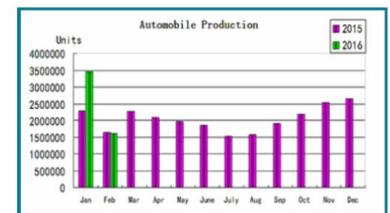
On March 22nd the China Association of Automobile Manufacturers (CAAM) announced that in the period January-February 2016, domestic car production increased by 3,7% Y-o-Y, in line with the growth rate of 2015.

Further good news: sales of the 10 biggest Chinese carmakers\* increased by 12,6% Y-o-Y in January-February 2016, well above the overall sales growth of 4,4% in the same period (source: Quest-trendmagazine). Now 46% of market share is controlled by locals.

Looking at advanced technology trends in the automotive market, it is

clear that vehicles' electrical architectures are becoming more complex and advanced. This has a positive impact on the connectors market. Analysts foresee that within year 2020:

- The numbers of connections in a car will increase from about 280 to 350 (+25%)
- The electrification will move from 12V up to 600V
- The digital data speed will increase from 65 Megabits/sec up to 1,5 Gigabits/sec (+2200%)



Source: www.caam.org.cn/english/ China Association of Automobile Manufacturers CAAM

So all in all, the new plant of KMD in China is very well positioned! China is the N.1 global auto market and still growing, domestic car makers are growing too, and technology is evolving in a favorable direction.

Considering that the automotive supply chain appreciates to source high performance products from local producers, we believe KMD is absolutely in the "right place".

\*10 biggest Chinese carmakers: SAIC, Dongfeng, Changan, Baic, Great Wall, Faw, Brilliance, Geely, JAC, BYD

**TECHNICAL FOCUS / 1**

**A last-generation laboratory to support KMD business**

In modern high-tech industries suppliers are required to ensure stable and consistent quality of both products and processes. In this perspective, a modern laboratory is strictly necessary and KMD has already invested more than half a million Euros in the construction of its new Henan plant laboratory with state-of-the-art equipments. Upon completion, the total investment will reach nearly one million Euros.

To ensure highest measuring standards, all equipments are primarily provided by internationally acclaimed brands. To ensure the know-how transfer and capacity-building, the training of the local laboratory staff will be supported by our European team.

The lab's structure was designed to cover all analytical needs of an integrated metallurgical plant. For this reason it includes three different areas: the first one is dedicated to the chemical analysis of copper alloys by means of two optical emission spectrometers and one oxygen analyzer. The second area is dedicated to the chemical analysis of the process fluids and will be soon equipped with a highly versatile optical emission spectrometer for simultaneous determination of elements in liquid solutions. The third area is equipped with the most modern machines for tensile and yield strength tests, hardness tests, bending and cupping tests and other equipments for dimensional controls and micro-structural analysis of metals.



**TECHNICAL FOCUS / 2**

**KMD Hot Dip Tinning - We are Ready!**

The installation of KMD Henan Hot Dip Tinning Line has been finalized in January 2016!

Some very encouraging trial tests were executed in February and March with pure copper and brass coils. The tests were executed with the presence of long-time experienced technicians of KMD Stolberg, who supported KMD Henan engineers and operators. These tests were useful to set the main process parameters, such as the composition of the tin bath, the automatic regulation of the heating power and the air-knives settings. Based on the results, KMD team decided to schedule some improvement actions, which are now in progress. The actions include some general process optimization, the optimization of the operators' control panels and the strengthening of safety equipments. All actions are aimed to achieve the best quality and process stability in full respect of Environment Health & Safety regulations. The tests program will continue in Q2 with the continuous support of KMD Stolberg operators and process engineers, in order to consolidate the improvements done thus far and focus on process control.



We expect the tinning quality to be soon fine tuned, so that samples will be prepared for KMD's customers as soon as possible. Should you want further information on our samples program, please contact KMD Shanghai Sales team.

*The Stolberg Times*

**NEWS**

**TS 16949 Audit in KMD Stolberg Plant**

§ As required by IATF rules, Stolberg plant was audited in March to confirm its ISO/TS 16949 certificate. The auditor has approved the process and specification in production, maintenance, quality and other departments. Stolberg plant successfully passed the audit. §



**COMING UP .....**

1. Cold Rolling mill: the installation of the first cold rolling mill machine in KMD Xinxiang plant is ongoing and it is planned to be completed at the end of Q3 2016. Stay with us in the next issue for a technical introduction.
2. TS 16949: KMD Xinxiang plant has already started applying for this famous important certificate to make sure we will be a full qualified supplier to the automotive market.
3. Now, you can also find more information about KMD group on LinkedIn and Wechat.



**CAMPAIGNS**

**KMD Stolberg attended MEC SPE Parma Fair**

§ KMD Stolberg team had a great moment at the MEC SPE Parma fair. We want to thank all the visitors for their great interest in KMD high performance alloys, as well as for the great attention dedicated to our ongoing roll-out plan into the Chinese market. Thanks again and see you soon! §

