1. Introduction

As ‘the world’s factory’ China has a high demand for the machinery and tools required for manufacturing on a massive scale. In particular the demand for high quality and innovative products in the mechanical engineering sector makes China a great potential market for European manufacturers. However, imitation and counterfeiting in the Chinese market can also lead to financial losses.

Thanks to the Chinese economic boom in the last few decades, China has been, and remains an appealing market for European companies from the mechanical engineering sector. In 2013 Chinese machine industries netted global revenues of EUR 678 billion, approximately 20% growth over the previous year. On the other hand, according to relevant research reports, German manufacturers alone are suffering a yearly loss of EUR 7.9 billion due to product and brand theft and counterfeiting. Such figures could have supported 38,000 jobs in the mechanical engineering industry in Germany.

As the market develops rapidly the demand for up-to-date technology and cutting edge machinery grows with it and the sophistication of Chinese companies in developing and protecting technology through IPR has also increased. This is illustrated by the sharp increase in patent applications by Chinese mechanical engineering companies in China and abroad. For example, Chinese companies in the digitalised mechanisation industry (Industry 4.0) have filed over 2500 patents since 2013 compared to 1065
patents filed by US companies and 441 patents filed by German companies. Although the high number of patent filings in China may partially have resulted from government incentives, the sophisticated use of patents in litigation shows that if intellectual property has not been protected in the Chinese jurisdiction, there is potential for major financial consequences.

Based on this evidence, it becomes clear that effective protection of trade marks, patents, designs, copyright and trade secrets through filing, registration and enforcement of intellectual property (IP) rights in China is important for the success of your business in China. Understanding IPR registration, management and enforcement in China, with its many differences from the EU IP system is a must in order to secure strong portfolios and protect company investments against risks posed by competitors.

This guide will provide a general overview of the way IP protection affects European SMEs in the field of mechanical engineering in China, highlighting the inherent dangers and providing an overview of the best preventive strategies and remedies against the most common China IP challenges.

2. IP Challenges for European Mechanical Engineering in China

Mechanical engineering companies doing business in China face a range of challenges related to the protection of their IPR and to growing and maintaining their market share. Some of these, such as counterfeiting are common IPR concerns, whereas some, such as reverse engineering are more specific to this region and sector. Please see the following sections for strategies to guard against such challenges.

Counterfeiting of components and even whole machines is a common complaint of mechanical engineering companies in China. Trade fairs, e-commerce sites and monitoring of your competitors are all good ways to know if your product is being copied in China. Such counterfeiting is possible due to a skilled work force and the use of reverse engineering. Reverse engineering, the process of reproducing an object by disassembling and copying the internal working, is approved in China as a legitimate means to obtain business secrets through lawful research and development and would not be considered an infringement of intellectual property. On the other hand the Supreme People’s Court has also confirmed that, “any party concerned that knows the business secrets of someone else by unjustifiable methods and then claims its acquisition as lawful reverse engineering shall not be supported.”

As well as counterfeiting your products, some competitors may try to ‘piggy back’ on the reputation of quality indicated by your trade mark by using it on their own products or copies of your own. Again, monitoring the market will keep you informed of any such misuse. Some companies may attempt to take not only some of your market share by selling counterfeit products, but may try to restrict your market access altogether by defensively registering patents and trade marks. This is relatively easy in China due to the first-to-file principle for trade marks and the lack of substantive examination (checking if such technology already exists in the public domain) for utility model (UM) patents, combined with some inefficiencies of the enforcement system. By registering your trade mark or patenting technologies integral to your product, a competitor can prevent export of orders by Original Equipment Manufacturing (OEM), block OEMs production, create friction with your distributors or even prevent your products from being exported from Chinese ports.

Without adequate patent registrations within China, manufacturers/distributors could face the following scenarios upon market entry:

- If you have not already entered the Chinese market, you will essentially be temporarily prevented from manufacturing or selling as the competitor owns the valid patent rights against your product;
- If you have already started manufacturing/selling products in China, an infringement claim could be brought against you;
- If you have products manufactured for you in China it could be possible for Customs to prevent a shipment of goods leaving the country if the patent owner instructs Customs authorities to do so; and
- Dilution of your company’s image, reputation and the good will you have established with business partners and customers

In addition there is a danger of being sued (or
threatened with court action) for the use of your own trade mark or technology if it has been registered defensively by another company. Such filings can be used to create long drawn out legal battles. The most famous case is Chint Vs Schnieder where French electronics company Schneider was forced to pay RMB 157 million to Chint for the misuse of a utility model patent registered by Chint. Schneider tried to prove that the Chint UM covered technology already in the public domain and have the patent cancelled but they were unsuccessful and in the end paid the highest damages awarded in an IP action in China to date.

All these risks can be avoided through timely implementation of a comprehensive protection and enforcement strategy with continuous monitoring of Chinese competitors’ portfolios and product lines. Before conducting any business activity in China, European companies should consider the most strategically important elements of their IP (by considering both the potential earnings and losses if the right is registered by another party) and protect these assets thoroughly. This preparation, taken in advance of entering the market is a key step to protect your investments.

3. Protection of Inventions and Designs Using Patents

SMEs in the mechanical engineering industry should have three priorities related to their Chinese patents: firstly, filing and securing the right patent portfolio; secondly, monitoring the patent portfolio of competitors and monitoring the market for infringers; and thirdly, taking appropriate enforcement actions.

EU SMEs should not hesitate to secure patent protection in China for their key technology (either via an invention patent with 20 years protection or a utility model with 10) after considering the overall IP strategy and available budget. Core technologies should be immediately and thoroughly protected to secure their smooth commercialisation and prevent others from infringing them unpunished. Since China follows the ‘first to file’ principle it is important to be prompt in filing for invention patents. Please also be aware of the requirement for novelty which means that a technology which has been patented in another country cannot be patented in China (unless the patent application is made in China within six months). Side applications of inventions variations may also be advisable in order to create a safe area around the core inventions, thus preventing competitors from designing around these core patents. At the same time, monitoring will enable SMEs to determine if Chinese competitors or even business partners may have appropriated their technologies by filing utility model patents and take action to promptly remove them.

Monitoring competitors’ patent portfolios will help SMEs keep track of what competitors are doing and how they are developing their technologies and products. This is very important for an SME to determine its market positioning, especially in a field of industry where the competitive gap between foreign and Chinese companies is not as large as in other industrial sectors (i.e. chemical and pharmaceutical products). Monitoring could also help to uncover cases of patent theft by Chinese competitors and assess the risk of ‘patent trolls’ (a person or company who has registered your patent in order to sue or threaten to sue you for misuse), and to take prompt action to prevent such risks, such as quickly filing invalidation proceedings against the patent. Monitoring of the patent portfolios of Chinese competitors and more generally the market (i.e. exhibitions, customer surveys, sales trends etc.), will also assist SMEs in identifying cases of patent infringement or misuse. Monitoring can be conducted in-house by the staff member responsible for IP protection or by external service providers.

Enforcement of patent rights is a most critical step especially for SMEs whose patent portfolios are not very large and their competitiveness is the result of key patents and products with long innovation cycles. In order to enforce your rights substantial evidence needs to be collected and advice from law firms specialising in IP is recommended. For more information see section 8 below.

More information on the process, time and cost of registering patents can be found in the Guide to Patent Protection.

**Design Patent Protection**

Design can be very important for SMEs in the field of mechanical engineering, especially for those involved in producing components. According to a 2014 VDMA study on product piracy, 64% of German mechanical engineering companies encountered counterfeit components and 56% of them suffered design infringement. Usually, components, such as handles or light fittings, will be left unmarked in order to be incorporated into another product or are not physically large enough to be printed with a trade mark. As trade marks are often not suitable for components, a design patent (that protects the look of a product) is likely to be the best legal tool available to protect such products.

As with other types of patents, there is a risk that a competitor may apply for a design patent covering your product/component which can lead to serious consequences including market access restriction, the inability to move goods manufactured in China out of Chinese ports, patent infringement lawsuits and general loss of reputation if you are considered a patent thief.

Timely registration of design patents for whole machines or components is paramount to avoid or reduce the above risks.

Please also see the guide on Understanding and Using China’s Design Patent for more information:


4. **Trade Mark Protection**

China employs the 'first to file' principle for trade marks which means the first individual or company to apply for it will be granted (with some exceptions) a ten year exclusive right to that mark. This has led to a risk that someone else will legitimately register your intended trade mark and will have a huge amount of leverage to either persuade you to buy the trade mark or to exclude you from the Chinese market as explained in section 2.

A second risk factor in China is the fact that China operates a sub-class system for trade marks which further divides the classes set out in the Nice Agreement which most EU countries use to designate trade marks. This difference can lead to problems when the European company does not register the trade mark for all the sub-classes they would like to have a registration for and as a result their trade mark protection is too narrow. For example, within class 7 for machines and machine tools, China further divides into several subclasses. For example, there are different subclasses for ‘agriculture machines’ (0701) and ‘machines for animal husbandry’ (0702). If you want to make sure you are protected for both, then you have to register both subclasses, and other applicable subclasses within class 7.

The best way to manage the risk of someone registering your intended trade mark is to act early to register in China. However, when this is not possible the strategy to handle such situations may depend on the type of person who has registered the right. In case of a competitor or business partner who has registered a trade mark you are using, the risk may be higher as the trade mark holder could effectively bar you from the market by threatening law suits if you use the mark in China. They can also use the trade mark registration to block products from being produced to export out of China by recording the trade mark with China’s Customs authority.

European SMEs should consider a Chinese language version of their trade mark as these tend to be neglected and are vulnerable to registration by Chinese companies or individuals. Chinese consumers tend to refer to foreign brands by a Chinese name. This is something a foreign company may not be aware of. This tendency to create a Chinese version of a brand or product name is such that even in case a foreign company has not yet decided on a Chinese name, the consumers will automatically create one and this may become generally accepted as the official Chinese name of that brand or product. If you are not aware of what the market is calling your product, you will not be able to stop the registration of the rights to the name. It is better to keep control of your brand by deciding on a Chinese language name for your product and registering it at the same time as the foreign language mark. As with patents, by monitoring the applications with the China Trade Mark Office (CTMO) it may be possible to prevent marks being registered as cancellation is much easier in the three months between the preliminary and full approval of the trade mark when the mark will be printed in the trade mark gazette for this purpose.

For more information on the registration, enforcement and monitoring of trade marks please see the Guide to Trade Mark Protection in China.

5. Trade Secret Protection

As mentioned above, many EU SMEs find their products reverse engineered and duplicated in China by either Chinese companies they do not know or by Chinese companies they have a relationship with. Reverse engineering in China is legal, unless during the process of reverse engineering IP rights (such as patents) are infringed or if trade secrets are violated. EU SMEs often do not realise that they have valuable trade secrets or do not protect them adequately which may cause them to lose competitive advantage. For example, information on how to use a machine effectively, or information related to the production process can be protected as a trade secret.

China does not have a standalone trade secrets law but protects trade secrets under the Anti-Unfair Competition Law. In order for information to qualify as a trade secret under Chinese law, the information must not already be in the public domain, must give a competitive edge to the owner and be kept confidential using physical, technical and contractual protection measures. In order to pursue a claim of trade secret infringement, significant evidence must be provided to the court showing that the information was kept strictly confidential and not easily accessible to any staff member or business partner. SMEs should also insist on signing non-disclosure agreements (NDAs) with employees and local business partners in spite of any claims that the request is not in line with local business practices. If a Chinese individual or company is sincere, it will sign the NDA.

For more information on trade secrets and NDAs, please see the Guide to using Contracts to Protecting your IPR in China and the Guide to Protecting your Trade Secrets in China.

6. Copyright protection

Copyright infringement is a significant issue in the Chinese mechanical engineering industry. Typically, photos of machinery are copied by a Chinese infringer and subsequently pasted on the infringers’ website. Other common examples of infringements of copyright in the mechanical engineering industry include (parts of) brochures, product description, and product packaging.

Although as in the EU, copyright is an automatic right in China (i.e. it does not need to be registered to be protected under Copyright Law), issues tend to arise when EU SMEs want to enforce their copyright, and they discover they have to provide notarised evidence of the date of their copyright creation to the court. This can be challenging to provide as emails and similar documents are not accepted by Chinese courts.

The Chinese system does provide for voluntary copyright registration with the China Copyright Protection Centre (CCPC) however, which counts as evidence of the proof of copyright. EU SMEs are advised to record their copyright (for example pictures and text from brochures or website) in order to facilitate successful enforcement against potential infringements.

For more information please see the Helpdesk’s Copyright guide.
7. Enforcement in China

China has a dual-enforcement system. All IP rights in China can be enforced before a civil court (People’s Court) or a specialised administrative body. Among the major differences between the two types of enforcement is the fact that economic damages derived from an IPR infringement can only be claimed before a civil court. Another difference is that generally, invention patents can only be effectively enforced through judicial decisions, while trade marks (and to a certain degree design patents) can also be effectively enforced through administrative proceedings. Judicial cases are normally of a longer duration and can be more expensive than administrative proceedings, however, court judgments have a higher deterring force than administrative decisions and are more likely to stop infringement. Administrative procedures require fewer formalities as to evidence but administrative authorities lack investigative power and have less ability to effectively prevent loss of evidence. Administrative action can provide an opportunity to collect evidence which can be used in a later court case.

Furthermore, IP rights can also be enforced by police authorities and criminal courts when they reach certain degree of severity, measured differently depending on the type of infringement, e.g. trade mark infringement reaching high volumes of sales and revenue. This criminal threshold can be difficult to achieve and other factors may influence whether the case is accepted by the authorities, for example it might be challenging for the police to accept a case against a powerful State Owned Enterprise (SOE).

In addition, in China IP rights can be protected at customs. Custom protection may be particularly effective against acts of exports of trade mark infringing products, a service not generally available in EU jurisdictions. For more information you can read the How to Record Trade Marks with Customs for more information.


Filing a lawsuit to protect patents or trademarks in China has often been considered as expensive and time consuming. The burden of evidence in Chinese courts is on the plaintiff and a significant volume of well-documented evidence which has been legalised, notarised and translated (for non-China documents) is needed for a strong case. In addition companies should take the advice of legal professionals on the likelihood of a successful result. Although the outcome cannot be concretely predicted in advance, factors such as the strength of evidence and the capacity of the opposition (a powerful local company may pose strong opposition to a European SME) can give an indication. If the litigation is successful however, it will not only provide a way to claim damage compensation (perhaps the most effective deterrent against repeating infringements), it will also provide certain influence in the local industry and will set positive precedents for the right holder against other infringers of the same IPR. On occasion, one successful litigation can stop an infringement/counterfeiting trend. In addition, the creation of IP specialised courts in Beijing, Shanghai and Guangzhou in 2014 has been a positive development towards a more experienced and capable IP judiciary which is likely to be reflected in the speed of case processing and the quality of future judgements.

Whatever channel of enforcement you choose, the most critical stage will be the phase of investigation, evidence collection and build-up of the case strategy. In China, the burden of evidence collection lies with the plaintiff and Chinese courts require a high level of documentary evidence and will not rely on individual testimonies. Also, mistakes in the formalities for evidence collection, such as securing evidence without proper notarial formalities and having loopholes in the evidence chain may result in weaknesses that will be easily exploited by the defendants.

For more information refer to the Guide to IPR Enforcement in China.

8. Case Studies

Dyson Technology Limited v Zhejing Jiu He Hong Sheng Technology Co., Ltd

Dyson is a British company specialized in designing/distributing vacuum cleaners, fans, heaters and tools. The company applied its first Chinese patent in the
year of 1999. At the time, Dyson was mostly unknown to Chinese people.

Since the filing of its original patent, Dyson became very popular in China due to its cutting edge vacuum cleaners and air multiplier. Despite Dyson’s comprehensive technology/invention patents, local companies started to copy its design. Zhejiang Jiu He Hong Sheng, the defendant of the case, was found manufacturing/selling patent-infringing air multipliers on famous local online markets. Though the products manufactured by the defendant were not exactly identical to Dyson’s, the court decided that there was sufficient similarity between the two designs to constitute a design infringement. This case illustrates that design patents are useful and as enforceable as other forms of patent protection.

**ANDREAS STIHL AG & CO.KG v Guangzhou O-Jenas Machinery Manufacturing Co., Ltd.**

ANDREAS STIHL AG & CO.KG (AS) is a chainsaw manufacturer located in Germany. The company owns several trademarks in China “STIHL” and “斯蒂尔” (Chinese transliteration of STIHL). The first trademark “ ” was applied on January 29, 1980.

O-Jenas is a Guangzhou based local manufacturer of chainsaws and garden tools. Through market survey and necessary investigation, AS found out that O-Jenas manufactured and distributed counterfeit “STIHL” branded chainsaws in July 2012. AS then filed a formal complaint with the local Administration of Industry & Commerce (AIC) and requested to raid the infringer. A raid action was conducted on July 27 2012 and 40 unsold counterfeit “STIHL” branded chainsaws were confiscated. As a result, the infringer, O-Jenas was ordered to cease any infringement activities and received a fine of RMB 60,000. AS then filed a civil lawsuit against the infringer and obtained a favorable judgment. Though the court ruled that the infringer was to cease any further infringement and compensate RMB 13,700 to AS, AS chose to initiate a second instance trial within the appeal period due to dissatisfaction with the compensation. The second instance court maintained the original judgement however, citing insufficient evidence to support AS’s case. This case shows administrative enforcement can be effective in both halting infringement and providing the necessary evidence for successful litigation in the courts.

**9. Conclusions and take away**

In order for EU SMEs in the field of mechanical engineering to succeed in their business in China and to compete with emerging Chinese competitors in the global markets, a solid strategy for IP protection in China is a must.

Firstly, European SMEs will have to arm themselves with the appropriate legal tools to protect their inventions and their brands in China, in order to prevent others from benefitting from their investments. The best way to prevent such risks is by securing comprehensive patent and trade mark portfolios, monitoring the portfolios of major Chinese competitors and cleaning up their hostile patent and trade mark filings through use of proper patent invalidations and trade mark opposition/cancellation actions.

Secondly, European SMEs in the mechanical engineering field must continually collect information regarding the local market and patent trends. Fact finding about competitors and their activities will help discovering their infringements and take proper and timely action against them. These activities will also allow these SMEs to determine whether they may be infringing IP rights of their competitors and avoid becoming the subject of litigation themselves. This is especially important in the mechanical engineering industry where Chinese companies are most developed and are securing strong IP rights and where the risk of infringements is highest for European SMEs of the same sector.

Knowledge of the available tools and effective IP strategies can help European SMEs to minimize business risk in and from China and to compete successfully both now and in the future.

**7. Related links and additional information**

China IPR SME Helpdesk guides:

- [Guide to Patent Protection](#)
- [Understanding and Using China’s Design Patent](#)
- [Guide to Trade Mark Protection in China](#)
- [Guide to using Contracts to Protecting your IPR in China](#)
- [Guide to Protecting your Trade Secrets in China](#)
- [Copyright Guide](#)
- [How to Record Trade Marks with Customs](#)
- [Guide to IPR Enforcement in China](#)
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Helpdesk Enquiry Service: Submit further questions to the Helpdesk via phone, email (question@china-iprhelpdesk.eu) or in person and receive free and confidential first-line advice within three working days from a China IP expert.

Training: The Helpdesk arranges training on China IPR protection and enforcement across Europe and China, including Hong Kong, Macao and Taiwan, tailored to the needs of SMEs.

Materials: Helpdesk business-focused guides and training materials on China IPR issues are all downloadable from the online portal.

Online Services: Our multi-lingual online portal (www.china-iprhelpdesk.eu) provides easy access to Helpdesk guides, case studies, E-learning modules, event information and webinars.

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Guide Last Updated 2018