

Intellectual Property in China's Chemical Industry

Companies Will Have to Prevent, Detect and Respond to IP Loss to Access Growing Market

Chemicals are an increasingly mature industry with a high degree of competition. In this situation, industry participants need to consider how to differentiate themselves and stay ahead of their rivals. Superior intellectual property is such a differentiating factor. It allows companies to participate in market segments with a smaller number of competitors and higher margins. However, intellectual property is only a differentiating factor as long as it is restricted to a limited number of players.



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For Western chemical companies, the threat of exposing critical intellectual property has therefore frequently been a key concern and an obstacle in expanding activities in China, particularly in the areas of production and research. However, China is already the biggest market for chemicals in the world, and current growth rates compared with other countries suggest that its importance will increase even further. Thus excluding China as a location for chemical production and chemical research is not a realistic long-term option for companies aiming to be leading global players. Without local production, chemicals producers have serious disadvantages with regard to cost and delivery times. Without local research, it is almost impossible to create products sufficiently adapted to local needs.

As a consequence, Western players will have to bring more of their intellectual property into China. At the same time, they will have to improve the way of protecting this IP. Similarly, Chinese chemical companies, particularly those that have already been in business for some time and thus have gathered their own intellectual property, must also protect their IP in order to avoid competition from other domestic companies.

The protection of IP can broadly be split in different phases — prevention of IP loss, detection of IP

loss, and response to the loss. We will discuss these issues separately.

Prevention of IP Loss

Any strategy to prevent IP loss must start with a definition and prioritization of the IP owned by the company. It is important to note that IP is not at all limited to protecting patents. IP covers a far broader area. For example, it also includes items such as customer lists, information on pricing, experience in how to best train staff, know-how in production, HSEQ (health, safety, environment, quality) knowledge, information on chemical formulations, names of key staff, supplier lists, specifications of raw materials, etc. While identifying these IP items, the location of the respective IP within the company should also be cataloged. Subsequently, the intellectual property items should be prioritized based on the likely damage a loss of each item would cause to the company. This allows management to focus on the most critical IP items and apply corresponding levels of protection. However, prioritizing IP is not as straightforward as it may seem. Opinions may differ about what constitutes key IP. For example, the legal team's priorities may differ from those of the research team and so on. As all employees have a role in

protecting IP, it is imperative to consider a broad range of perspectives.

After key IP assets are identified, measures should be defined to reduce the exposure risk for individual IP items. Obviously, these measures will affect many different areas, and we will only give a few selected examples.

Facility design: Chemical companies setting up new facilities may consider designing them from the ground up with security in mind. For example, conference rooms for meetings with external guests may be located at the main entrance, thus preventing visitors from walking through a facility unattended. While closed-circuit TV cameras may be helpful, this investment is a waste if the security staff is not sufficiently trained to use the system. Controlling IP at a single centralized facility with robust security is easier than operating many smaller locations.

Black box approach: Bringing IP in as a "black box" from outside (this may be from outside of China for multinational companies, or from outside of, e.g., a production site for a domestic company). This can apply to a variety of items including mixtures of raw materials, equipment parts or software. Building equipment in China could mean entrusting contractors with schematics and designs. The same contractors may see business opportunities supplying

the same equipment to competitors later.

Access to IP: IP should be available only on a need-to-know basis, i.e., access to specific IP should be limited to the staff requiring it for their specific work.

IT setup: Basic precautions such as utilizing computers without USB slots, or limiting access to personal email websites, should be taken to prevent theft of IP. In one case, an employee downloaded a series of control settings and other key technical and environmental data onto a USB device just days before he resigned. Even though the company learned about the incident and took action against the employee, it was too late to undo damage caused by the employee passing the information to others.

Employee retention: Companies must be strategic about protecting their core assets — knowledgeable employees. This includes creating long-term career plans and incentives for employees with access to sensitive IP. This is particularly important for segments booming in China. In these segments, the danger of competitors poaching knowledgeable employees is particularly high. At the same time, companies should conduct adequate due diligence on new hires to understand if they left any former employers under a cloud of suspicion.

Detection of IP Loss

Keeping an eye on the markets; listening to customers, suppliers and employees; and taking whistleblower reports seriously are all good measures to detect IP loss. The human resources department also can play an important role, particularly by conducting exit interviews. These interviews may help detect a problem with an employee who is leaving. Even more importantly, as employees leave, they may feel more comfortable reporting a colleague's inappropriate behavior.

Suppliers and customers are also good sources of intelligence. They are the ones who are usually approached by new companies purporting to "offer the same technology at a better price," which is a red flag for IP theft. Suppliers also have opportunities to visit a range of plants, and may spot equipment and design infrastructure that copies the original. Informal reports from these sources are often the first step in detecting IP loss.

Response to IP Loss

If a chemical company suspects patent infringement or theft of a trade secret, it should investigate to gather more information. As a first step, it is important to understand the background and shareholding of

the potential infringer. This will help companies formulate legal strategies and choose jurisdiction.

Next, any publicly available information that can demonstrate a link between the original technology and the infringer should be identified. Technicians may have carelessly disclosed too much about a company's trade secrets in an academic paper. Or a Chinese media article may have photos of equipment under construction and specifications about production capabilities. A suspected infringer's website may disclose product specifications (sometimes in Chinese language only) that are helpful in building a case. Lastly, local environmental regulators may require technical information, disclosed within the environmental impact assessment report, to be publicly available for a period of time.

After a thorough review of all publicly available materials, investigators can focus on gathering evidence including interviews, photographs of equipment, product samples, product brochures and certificates of analysis. Clients should discuss in advance with risk consultants and legal counsels how any such evidence might be used in court. This can help guide collection of the evidence so that it is admissible in court.

Changes to the Chinese legal system may also make it easier for companies to litigate and recover damages. China announced the establishment of specialized IP courts in Beijing, Shanghai and Guangzhou. The cases heard by these courts will be technically complex matters such as patents and technical trade secrets. The Supreme Court has also proposed removing limitations to damages that can be claimed by patent owners.

No Total Security

Admittedly, all the measures outlined above will only limit the risk and the consequences of IP loss — there are no guarantees to stop it. Some chemical companies have experienced significant IP loss, not in China, but in their Western home countries. This has obviously not stopped them from doing business there. And with the right strategy, companies will be able to achieve a similar level of IP security in China as in their Western markets.

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Lanxess Starts New EPDM Rubber Plant in China

German chemical producer Lanxess has started production at its new ethylene propylene diene rubber (EPDM) plant at Changzhou in China's Jiangsu Province.

Over the next several months, the company said it will be running sampling and approbation processes with customers. The new 160,000 t/y plant in Changzhou Yangtze Riverside Industrial Park, said to have access to "excellent storage and ship uploading facilities," will produce ten premium grades of EPDM tai-

lored to Chinese and Asian customers' needs.

With the gradual ramp-up of the new facility to its nameplate capacity, Lanxess said it will "complete" its global EPDM asset base. In fact, with the planned shutdown of the 70,000 t/y EPDM plant at Marl, Germany, by the end of this year, output will actually be reduced.

In announcing the planned closure simultaneously with publication of its annual results for 2014, in mid-March the Cologne-based com-

pany said the Marl plant is "the least competitive in its EPDM production network, due to its poor economies of scale and relatively high energy and raw material costs. Some 120 jobs will be slashed in the move.

Excessive investment in an over-supplied rubber market—in which Lanxess is the leading player—has been blamed for the dramatic profit slide that led to the forced resignation of former CEO Axel Heitmann in early 2014 and the subsequent departure of managing board member

Werner Breuers — who had responsibility for the group's Performance Polymers business — in August 2014.

"We still have significant overcapacity" for synthetic rubber, current CEO Matthias Zachert said at the annual results press conference. For 2015, he said the business will remain "challenging." Earnings of the Performance Polymers segment, which also includes engineering plastics, are expected to be in line with the 2014 figure of 808 million. (dw)

BASF Signs Coatings Deal in China

BASF's Coatings Division has signed a manufacturing agreement with Guangdong Yinfan Chemistry Co, a Chinese firm that recently opened a new production facility at Jiangmen City, Guangdong Province.

Under the agreement, Yinfan will manufacture automotive refinish coatings, targeting the non-premium segment, for BASF at the new plant, using the German chemical giant's formulas and technologies.

"Establishing a reliable, regional manufacturing footprint for automo-

tive refinish coatings is important for fulfilling the growing market demands," said Peter Fischer, senior vice president, Coatings Solutions Asia Pacific at BASF. Partnering with Yinfan "supports BASF's ambitious plan in this fast-growing market," he added.

Qingtao Zhang, Chairman of Yinfan, said his company is "fully committed to meeting the stringent quality requirements of BASF in automotive refinish coatings." (dw)