

## CULTURAL HAZARDS: THOUGHTS AND EXPERIENCE TO GUIDE INTEGRATION OF CORPORATE EHS STANDARDS IN CHINA AND OTHER COUNTRIES

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Perceptions of environmental, health and safety (EHS) standards in China are poor. Responsible companies require high standards of EHS, wherever they operate in the world. An aim or instruction is not enough. Operations in a country accustomed to different ways of working require different methods to achieve EHS success. This paper investigates some of the factors that can influence the process of integrating corporate EHS standards following an acquisition in China. It is argued that by gaining an understanding of differences in philosophy and psychological types between China and the West it is possible to achieve and maintain mutual respect and trust. Only then can the importance and detail of corporate standards be communicated effectively to all employees. By working in this way Elementis has achieved good results in EHS performance in a sustained way that builds on existing ability and ideas. With some adjustment the approach could act as a template for applying corporate standards in other countries.

KEYWORDS: China; Corporate EHS standards; Elementis

### INTRODUCTION

A lifetime of experience in polar regions does not prepare one for living in the jungle. Similarly, companies with long experience of process safety and an outstanding health, safety and environmental record in their own country are not necessarily equipped for replicating their success in another country. That does not mean it cannot be done, or even that it has to be difficult. But it does require an appreciation that the same approach will not necessarily suit all cultures. Having the right motive or aim is not enough – however worthy. You have to understand why it worked for you before and be prepared to adapt the approach to achieve similar performance in a different culture. “Seek first to understand, then to be understood” (Covey, 1989) is good advice, and not just for individuals: it applies at a corporate level to instil trust and hence increase the chances of achieving corporate objectives.

The cultural hazards that exist when acquiring a company in another country are compounded when a different language is involved. Nevertheless, following various acquisitions in China over several years, Elementis (see Appendix A) has installed corporate environmental, health and safety (EHS) systems successfully and to good effect through mutual understanding and respect. This paper draws on that experience to explore the cultural issues in China from a range of theoretical and practical perspectives. A relatively deep understanding of differences from the West should bring benefits unavailable through action based on myths and stereotypes.

### PERCEPTIONS

Incidents such as the mining disaster at Gujiao City in Shanxi province (2009) and the chemical plant explosion that polluted the Songhua River (2005) reinforce a belief that there is a shortfall in the EHS practices and performance

in China. The truth is that other countries also have disasters. Tragic or regrettable as they are, these are the high magnitude emotive issues that grab the headlines. Even concerns about occupational safety in factories manufacturing consumer goods for export (Brown, 2003; Hawthorne, 2007) tell little about safety in the chemical industry. As in any country, chemical companies investing in China must identify, assess and manage risks across the whole spectrum of EHS hazards – facility by facility.

### CORPORATE STANDARDS

Regardless of whether or not the high risk perception is translated into a generic problem in the chemical industry, there are ethical, defensive and practical motivations for adopting corporate EHS standards across an organisation.

Responsible chemical companies protect people and prevent harm to the environment, wherever they operate in the world. Complying with applicable laws is necessary but not sufficient. Companies should also look at the nature of their operations and draw from experience elsewhere to prevent injuries, occupational illnesses and environmental damage. It is not just a question of being safer or more environmentally friendly. Ethical concern to treat all employees alike through common high standards has the potential to create trust across an organisation.

Another, complementary, set of motivations is more defensive. International companies need to be able to demonstrate to others that they act consistently between all parts of the world – including the way the company treats people and the environment. Such consistency, as long as it is consistency of a high standard, helps protect reputation and brand. It may also prevent or mitigate legal challenges. Note that a defensive motivation is congruent with a strong ethical approach, but is there to reassure Boards of Directors and investors rather than employees.

Then there is the practical aspect. Elementis aspires to the discipline of operational excellence in business.<sup>1</sup> Operational excellence requires systems thinking (Deming, 1993; Senge, 1990) to optimise the way that all functions, including EHS, are integrated across the business. In this way a standard only needs to be researched and established (or revised) once for the whole organisation.<sup>2</sup> Common systems however may still require different emphasis depending on factors such as the specific process hazards at a site and potential environmental impacts.

A word of warning though from Sir Karl Popper (1957); he wrote (in connection with central holistic planning) that “it is easy to centralise power, but impossible to centralise all that knowledge ... necessary for the wise wielding of that centralised power”. There are parallels in EHS management. If you introduce corporate standards make sure local EHS expertise is retained to apply the standards.

#### MUTUAL RESPECT THROUGH UNDERSTANDING PHILOSOPHIES OF NATIONS

When considering how to work with people in other countries one rational way is to look at the predominant philosophy in the country concerned. Western philosophy, and business, has been based largely on analysis and logic – so called left brain activity. Eduardo Casas (1993) researched different personality types in different cultures. He showed that the US tradition of Pragmatism manifests itself in the “action-oriented realists” of Myers & McCaulley (1985). He compared this with a tradition in the UK of Empiricism<sup>3</sup> in a context of social discipline and constructive criticism. In the absence of systematic comparative cultural research in the East he speculated that more introverted, conservative values associated with life in China may be associated with the continuing influence of Confucianism. With its stress on virtue and study (Riegel, 2006), a legacy of Confucianism could point to a more cultured and thoughtful approach in China, including the approach to EHS. Note that he advocated a balance between study and reflection: “He who learns but does not think is lost. He who thinks but does not learn is in great danger.” (in Riegel, 2006).

If thinking in China is still influenced by early Chinese philosophers, it is worth being aware of the basic principle of the Tao. As a gross simplification, the Tao links everything, including thought, into a unified system. More helpfully for understanding why this may be important, Tao includes the concept of Yin and Yang<sup>4</sup> – a

<sup>1</sup>Treacy & Wiersema (1995) argue that market leaders succeed because they focus on a single approach to business, choosing operational excellence or product leadership or customer intimacy – not a mixture.

<sup>2</sup>It may of course be necessary to translate into another language but the development is common.

<sup>3</sup>The Empiricist Locke argued that everything we know is derived from experience.

<sup>4</sup>Yang includes aspects such as light, dominance; Yin the opposites such as dark, submission.

paradoxical balance of opposites in all things that can be used to understand and explain anything.<sup>5</sup> Advice from The British Embassy in Beijing (Los Angeles Chinese Learning Center, no date) is that, where Westerners tend to look for clear alternatives (option A versus option B), Chinese managers may examine ways to combine both option A and option B. This more holistic thinking can cause misunderstanding and, because it may take longer, it could create a false impression that colleagues in China are less decisive. However, as Buzan & Buzan (1993) assert, holistic thinking, requiring both hemispheres of the brain, can lead to superior results.

A confounding factor is the residual influence of Mao Zedong. In The People’s Republic of China pictures of Chairman Mao are still on banknotes, in some homes and restaurants, and at times on the streets; evidence of the regard in which Mao is still held as a revolutionary leader and, importantly in China, as a poet and calligrapher. The Los Angeles Chinese Learning Center suggests that Mao Zedong’s thoughts on discipline, published in 1966, provide a valuable insight into structures which persist in many Chinese organisations. According to Chairman Mao, “The individual is subordinate to the organisation. The minority is subordinate to the majority. The lower level is subordinate to the higher level.” China was governed in this way for over 20 years.<sup>6</sup> The legacy is that Chinese society and companies tend to be organised hierarchically, group oriented rather than individualistic and more ready to follow instructions. The risk is that individuals may be less likely to challenge practices if this could be seen as disrespectful to more senior or corporate managers.

This difference in philosophy between East and West is important. As Casas says: “When differences are perceived among cultures, emotional defensive reactions and misunderstandings emerge from the confrontation of opposing collective points of view” (Casas, 1993, p. 74).

#### PSYCHOLOGY OF INDIVIDUALS

Even if one accepts that it is possible to point to a dominant culture for the population as a whole in a country, it does not mean that everyone is alike. Psychologists such as Isabel Briggs Myers and Mary McCaulley (1985) state a view that appears to be commonly accepted by psychologists, namely: “each individual person is a product of heredity and environment”. But despite this, as they go on to say, “In practice we tend to assume that other people’s *minds* work on the same principles as our own.” Failure to appreciate that different people think in different ways creates a risk of misunderstanding when expecting compliance with corporate standards – especially in a corporate office thousands of miles away.

<sup>5</sup>There is also Fengshui (literally wind-water) which maintains that everything interacts: buildings, rooms etc must be correctly ordered for best results.

<sup>6</sup>Even there though there are links to the 4th century BC Chinese philosopher Shan Yang, and others, who argued that people exist for the benefit of the Ruler and his State (Legalism).

Fortunately, experienced line managers know that different employees respond in different ways when issued with the same request or instruction – but luckily for all of us, not in six or seven billion possible ways. This is the basis for the theory behind “type” theory such as the Myers-Briggs Type Inventory (MBTI), see Appendix B.

The author was unable to find robust data on personality types likely to predominate in manufacturing operations in China to compare with studies in the West. However, Sharp (2004) reviewed three studies of MBTI with Chinese culture (university students, school administrators and management students). He warns against generalising about the Chinese population, because of small samples with vocational and educational biases, but concludes that there are consistently very high percentages supporting both introversion and sensing. In comparison, Western culture is often goal orientated and predominantly extravert, with a tendency to celebrate individuals’ success (Atman, 1993).

Nevertheless, despite a lack of quantitative data, there is qualitative evidence that can be used with MBTI theory as a way of understanding the culture in China and, by analogy, elsewhere. From this tentative understanding a more respectful and effective method can be employed for implementing corporate standards.

#### LANGUAGE

Perhaps the most obvious obstacle for Western companies operating in China is the Chinese language. It is not even a single language. While Standard Mandarin is the most common, there are several other regional languages such as Wu, Min and Cantonese – all, it is said, mutually unintelligible. Add to that different scripts (simplified and traditional) and a different culture – translation is not straightforward.

Currently, few engineers and managers in the West speak or read more than a few words of Chinese. In contrast, an increasing number of Chinese engineers and managers in the chemical industry can speak and read English, or have a colleague who can do it for them. Some appreciate the nuances of the English language through several years’ study abroad. But, as with any second language, apparent fluency, however impressive, does not necessarily mean comprehension in the way that a native speaker understands. The Westerner who cannot speak Chinese has little chance to explore comprehension through shared vocabulary and tone, appreciation of grammar or the appropriate use of sentences in context.<sup>7</sup>

Choice of words depends on how large a vocabulary the speaker has, and selecting an appropriate word. In the chemical industry this includes knowing technical terms. A dictionary and thesaurus will help but can lead to confusing or erroneous results. Even in the West there can be confusion over some words. Take “dike” for example. In Somerset or The Netherlands this can mean a drainage

<sup>7</sup>The assertion is that the key aspects of linguistics in this context are semantics, syntax and pragmatics.

ditch; in Scotland a dry stone wall; in the US a containment wall. Do you want a water channel or a bund built around a storage tank? We do not even spell it consistently!

Increasing use of electronic translation devices and on-line translation sites<sup>8</sup> can make it quick and easy to translate; the hazard is that unquestioning acceptance of the result can lead to a false sense of confidence. Such devices have merit but should only be used as a starting point. All parties should be encouraged to ask questions to check that understanding is correct.

English grammar poses a different risk. If incorrect grammar is used by a non-native speaker it will usually prompt someone with English as their first language to think carefully. Intuitive interpretation will then take place. Conversely, a native English speaker should take great care to use correct and simple grammar to reduce bafflement in non-native speakers. Inability to understand complicated or casual grammar could also lead to embarrassment. This could affect relationships and lead to a reluctance by the non-native English speaker to engage in future conversations.

Having appropriate words and word order are necessary to convey meaning, but effective communication also requires an appreciation of the needs of the listener. So, sentences in English to a Chinese listener or reader should be tailored to suit the culture and customs in China. What may be familiar, or common practice, in the West may not be in China. Beware of idioms and humour. Establish and respect the expectations of politeness and formality, then be precise, brief and clear.

The way of saying things can certainly differ. The translation of a sign seen in the Forbidden City in Beijing was almost poetic: “A single act of carelessness creates the eternal loss of beauty.” One of our sites in Shenzhen was known locally as “The plant with red workshop near the NanShan vegetable free market.” Such visual descriptions point to a more pictorial (right brain) way of thinking in China. The visual impact and structure of written Chinese provide further evidence.

Unlike the English alphabet, Chinese characters are based on stylised pictures of objects (pictographs). Additional symbols may be added to create more complex ideas (ideographs) and sounds (phonetic or harmonic writing). Root characters (radicals) are used as building blocks either alone or in combination (Peng, 2005). Consider then the modal way that characters are laid out on the page (as if in invisible squares, evenly spaced), and the high regard for calligraphy as an art form. It all supports the theory of a more holistic way of approaching topics in China.<sup>9</sup>

<sup>8</sup>For example: <http://babelfish.yahoo.com>

<sup>9</sup>This assertion is based on the author’s observation in China and Taiwan. Similar modality can be seen in other forms such as the layout of the Terracotta Warriors and the Great Wall. The Taipei National Palace Museum has a wonderful display of calligraphy; the calligraphers’ emotions can be appreciated through the visual impact of their brush strokes even if one is unable to understand the content.

### SPECIFYING REQUIREMENTS UNAMBIGUOUSLY

Instructions frequently assume a level of competence on the part of the user. False assumptions may be made on knowledge of the type of work, the equipment, and the area in which the work will take place. One way to reduce errors is to develop robust operational definitions.<sup>10</sup> Put simply this means that, when writing a procedure, there needs to be a common understanding between the author and all who may use the procedure of what a correct outcome looks like. "What is clean?" is a classic example cited by Deming (1986). Good procedural systems also include a check to validate that each user is capable of following the procedure correctly.

The problems in setting operational definitions multiply when translating into another language. At a technical level even in The Netherlands what may seem unambiguous in the UK and US can be misunderstood. For example: you need to remember that a comma, rather than a dot (period), delineates decimals from units (the dot is used to separate thousands). The US uses different gallons, tons, and date format from the UK. Inadvertent errors can occur in communications.

As a real life example: the instruction for off-loading chemicals from a road tanker included the instruction: "chock at least two wheels" (good practice to prevent accidental vehicle movement). During a visit to one plant in China it was observed that a sulphuric acid delivery tanker was about to discharge without having its wheels chocked. This omission was pointed out. Through translation the delivery driver placed the chocks against the wheels. He then drove his vehicle to sit on an area of flat land that formed the top of the wooden chocks. This new unsafe situation was corrected, but a root cause lay in a lack of appreciation of potential translation errors, in conjunction with a practice, also observed elsewhere in China, of using chocks to adjust the vehicle level during discharge operations.

### REGULATIONS & PRACTICES

One of the issues when a Western company acquires manufacturing facilities in China is the difference in EHS practices between China and Western countries. It would be wrong however to assume that all that is required is a package of instructions to comply with corporate standards. There must be no compromise on adopting best (or at least "good") practice in EHS standards. But one should then optimise the way to apply the standard in a China context. Relying solely on a translation of a Western standard into Chinese, with no thought of how it will be understood, risks reducing the effectiveness of the standard.

Consider, for example, injury reporting. In China injuries are classed as minor if they result in <105 days loss of working. Above that they become "serious".

Compare that distinction with the UK requirement under RIDDOR<sup>11</sup> to report all >3-day lost time accidents; or the more stringent reporting of OSHA<sup>12</sup> recordable incidents<sup>13</sup> in the US. However, China, unlike the UK and US, includes injuries sustained while travelling to and from work. External reporting requirements inevitably send a message as to what is acceptable. National reporting must still be observed, but international companies should set their own mandatory reporting standards to indicate corporate expectations. This requires careful explanation otherwise it may be taken as disrespectful to the integrity, sovereignty and laws of the country concerned, or considered as unnecessary bureaucracy.

Environmental regulations reveal another issue. China has a hierarchical approach to EHS. Regulations are issued at national, provincial, city and county level. So, although the main legislation for environmental protection is at a national level, regional and local governments can also enact environmental standards and regulations for operations that come under their jurisdiction. These may be more onerous than national regulations.

The size of your organisation or project will to a great extent dictate which level of the government structure takes the lead in your work. For example a national project such as the gas infrastructure for China would be handled by the Ministry of Environmental Protection (MEP); at the other end of the scale a waste water treatment plant for a small industrial site in a rural location would be handled by the relevant county Environmental Protection Bureau (EPB).

Environmental regulations are based around an Environmental Impact Assessment (EIA), which must be validated by a Completion Acceptance Inspection (CAI) to gain pollutant discharge registration and permit. Permits for the waste water treatment plant mentioned above would be issued by the local EPB, who would also have responsibility for enforcement. Note that this can lead to variation in control of pollution across the country. It is important to get to know the local government officials to build trust and understand the local issues. One should work with them to help meet the needs of local communities. In a rural area the interests of local farmers or fishermen can have a strong influence on what is permitted. In an urban industrial zone it may be the local business economy that counts most. This is probably one of the most contentious and misunderstood issues. Extraordinary levels of government bureaucracy reside in different parts of China. That in itself is tough enough but, when someone translates the protocols to you, key pieces of information may be omitted. This can prove expensive or time-consuming later, as well as forcing unexpected delays.

<sup>10</sup>Based on the seminal work of Walter Shewhart (1939) on operational meanings.

<sup>11</sup>Reporting Injuries Dangerous Diseases and Occurrences Regulations.

<sup>12</sup>Occupational Safety & Health Administration.

<sup>13</sup>Basically all injuries or illnesses that require more than First Aid treatment.



## INTEGRATION HISTORICAL GUIDANCE

Integration of a new acquisition is not a new topic. Others in the past have provided advice even if acquisition then was based on conquering rather than purchasing.

Machiavelli (*c.* 1513) advised that, when a country with a different language, customs and institutions has been acquired, the most likely chance of success is to go and live there yourself. Visible presence and direct access is appreciated locally. But importantly he also advised that “A city used to freedom can be more easily ruled through its own citizens, provided you do not wish to destroy it.” Many will recognise the benefits to Western companies of having a senior manager from the parent company present in an oversight role – but allowing local managers to run the day-to-day operations. A key feature of this approach is a respect for cultural differences.

“Time spent in reconnaissance is seldom wasted” – the adage attributed to Sun Tzu (6th century BC)<sup>14</sup> has many peaceful applications. The maxim should be applied at an early stage to integrate new acquisitions into corporate systems – the aim must be to achieve success in an effective and enduring way. An assumption that we will succeed without good intelligence from the field is both arrogant and sub-optimal. The main difference from military operations is that there is no enemy, only unfamiliar territory – reconnaissance should be a collaborative rather than a covert exercise.

## TRUST BUT VERIFY<sup>15</sup>

A comprehensive EHS audit is a form of secondary reconnaissance. There will, or should, have been a process of “due diligence” undertaken prior to the acquisition. However, pre-acquisition work tends to focus on potential liabilities and may not reveal what needs to be done to meet corporate EHS standards, or even compliance with legal regulations. An early audit can answer these questions and forms part of the “Plan” stage of Deming’s Plan-Do-Study-Act (PDSA) improvement cycle (Deming, 1986).

Conducted in a collaborative rather than adversarial way, EHS auditing provides the opportunity to get behind a due diligence report. It can also start to build a relationship with Chinese colleagues in Operations and EHS. Confidence built in this way makes subsequent telephone calls and email much easier. In common with all facilities, periodic audits are then required to assure continued compliance.

## STANDARDS

In addition to auditing, Elementis applies a series of corporate standards, including:

- policies and procedures for life critical activities such as working at heights; occupational health standards; and insurance related requirements,
- management of change and capital expenditure proposals,
- EHS incident reporting and investigation (including near misses),
- risk management and business continuity planning (Gardener, 2008).

For process safety there should be dialogue, and where appropriate advice, on recognised and generally accepted engineering best practice e.g. in design, inspection and maintenance of storage tanks, process vessels and pipework for aspects such as pressure relief, mechanical integrity, grounding and bonding.

A vital point for sustaining success is for everyone to know what is required to achieve excellent EHS performance. All this takes time and commitment. It can only be done by leaders locally who fully understand the standards in English and then translate them accurately so that everyone in their facility (employees and contractors) understands – whatever language they speak. The advantage in China is that taking orders from your superiors is a natural way of working.

China in turn has much to teach the West. One must remain open to ideas and learn from their successes. For example, we have learnt from our factories in China and Taiwan, which have outstanding bi-lingual management systems documents and operate a highly successful 5 S<sup>16</sup> programme to improve safety as well as quality.

To facilitate international communication and treating every region alike, a key feature of the Elementis approach is integration of the corporate IT infrastructure. A priority with every acquisition is early implementation of corporate email (Lotus Notes) and the linked EHS databases e.g. for incident reporting and investigation.

## A PRAGMATIC APPROACH TO IMPLEMENTING STANDARDS

Corporate standards may top up, but cannot replace, national or local standards. Conversely just because there are regulations in some countries does not mean that they must be applied in other countries if it makes no sense, or places unnecessary restrictions on operations.<sup>17</sup> An example is bamboo scaffolding.

The immediate reaction of Western engineers may be to dismiss the use of bamboo for scaffolding as unacceptable. Certainly some bamboo scaffolding can be decidedly rickety. However, research in Hong Kong showed that it can be used in a safe and effective way if standards are complied with (Chung & Siu, 2002).

<sup>14</sup>Note that attribution to Sun Tzu is questionable. The phrase was not found in the English translation by Giles (1910), but does encapsulate much of the thought expressed in the translation.

<sup>15</sup>The Russian proverb “Doveryai, no proverya” used by Ronald Regan in an anti-proliferation context.

<sup>16</sup>Seiri (Sort), Seiton (Set in order), Seiso (Shine), Seiketsu (Standardise) Shitsuke (Sustain) – The Japanese methodology to expand good housekeeping practice into a way of organising a workplace.

<sup>17</sup>One would of course expect that best practice is transferred with or without a regulation.

Generations of experience in China working with bamboo provides knowledge that makes it safe in a way that it would not be in the UK or US. Correctly used, there are several advantages of bamboo. Chung & Siu suggest light weight, ability to tailor size to the features of the job and speed of assembly. It is also environmentally friendly from sustainable bamboo forests. Besides, outside city areas, alternatives may not be readily available and in untrained hands could be more hazardous. The issue may be to set and enforce good practice with bamboo quality, design and construction, and then focus on full boarding, providing fall protection and instituting regular inspections on the condition of structures and equipment.

#### SO HOW ARE WE DOING?

Based on the stringent performance indicator of recordable injuries and illnesses, the company's overall safety record has been consistently good over the last few years (the Elementis global recordable incident rate in 2008 was 0.73 per 200,000 hours worked). Interestingly, operations in China and Taiwan contributed with recordable incident rates that are less than one half of the rate for the company as a whole. Sceptics might argue that there could be under-recording in China and Taiwan. It is plausible that there is greater tolerance by workers in China to minor injuries, linked perhaps to the complications of getting to a hospital or a fear of losing their job. However, to counter this Elementis fosters a robust incident reporting system, visible on line, with reports reviewed regularly by senior management (Gardener, 2003).

#### SOME OTHER THINGS TO CONSIDER

##### LOCAL CUSTOMS

In any country it makes sense to be polite and act with respect for local customs. It can make all the difference in gaining trust and goodwill. Understanding the culture in China is no exception.

Around the world there are subtleties that can be missed inadvertently. For example is calling someone by their first name when you first meet a sign of friendliness or disrespect? In China the surname (family name) is conventionally placed before forenames, but not always. It is polite to use the surname in formal settings in China. Those unfamiliar with Chinese names may not spot which is the surname and use the wrong one in greeting.<sup>18</sup> Fortunately for us, many Chinese people now adopt a Western forename as well as a Chinese one.

##### HOLIDAYS

Traditional holidays matter. Chinese New Year (2009 is the year of the Ox) may be just an interesting spectacle in the West but it is a major time for celebration in China. One should not expect a full complement of people to be

available over this period in China any more than over the Christmas and New Year period in the UK. The Mid-Autumn festival in China is the equivalent of Thanksgiving in the US.

##### LONGITUDE AND TIME

The distance between China and the West influences the opportunities to visit China.

Time differences affect our business expectation of virtually instantaneous contact. China is eight hours ahead of GMT (13 ahead of EST).<sup>19</sup> The time difference creates an operational inconvenience for telephone calls. Emailing frequently takes place when the other party is not in the office. Good discipline is required to call or email China early in the UK morning if an immediate response is required.

##### FACE

Less tangible but highly important in China is the concept of maintaining face.<sup>20</sup> Good relationships in China will be enhanced if you give face to others through being respectful, and maintain face yourself by acting in a professional manner. For example, the fact that someone does not disagree with you openly does not mean that they agree: silence may indicate dissent. Conversely giving public praise or credit, where due, is appreciated as it reinforces or enhances reputation.

##### MAYBE IT IS JUST A QUESTION OF LUCK

Luck plays a part in life in China. Many things have good or bad luck associated with them. Red and gold are lucky colours (associated with life and wealth). Black (signifying death) and sometimes white (associated with funerals) are unlucky. It is worth thinking about choice of colour – for example when designing signs and other visual aids for EHS purposes. A red warning sign could be seen as lucky.

Numbers are also associated with luck. The number 8, or several 8s, is lucky in China (it sounds like the verb to prosper). Number 4 is unlucky in China (having a similar sound to the word for death). Consider avoiding the use of 4 much like, for example, UK houses often miss having a number 13.

##### CONCLUSIONS

Historical developments over centuries have led to different philosophical approaches in different countries. While a range of types of individual may be present in each country, the dominant philosophical thought in a country

<sup>19</sup>China has no daylight saving time. In summer the difference is thus seven hours BST (12 EDT).

<sup>20</sup>This section is based on the author's direct experience but draws on guidance for business negotiations, such as available at [www.kwintessential.co.uk/resources/global-etiquette/china-country-profile.html](http://www.kwintessential.co.uk/resources/global-etiquette/china-country-profile.html), and applying it in the context of implementing corporate EHS systems.

<sup>18</sup>As a rough guide, usually the surname is a single syllable.

tends to condition people within those countries to a prevailing way of working (and culture).

In China there appears to be greater use of the brain's right hemisphere, with all its artistic and synthetic attributes – promoting a more holistic way of thinking. In contrast, Western philosophy tends towards linear, analytical, logical left brain activity (often encouraged in engineers in the West).

Lack of appreciation of different cultures and ways of thinking is a hazard. Merely translating Western standards into Chinese may lead to notional compliance without full understanding. Failure to appreciate this point can lead to sub-optimal system integration with implications for EHS performance. The aim should be to adopt best EHS practice in a Chinese context. Even then, how the message is communicated is important, as well as the message. A key factor is to take the time to work with EHS leaders in China to ensure that they comprehend not just the words but also the intentions, unambiguously, in English. Understanding gained in this way fosters effective communication locally to employees in China in their own language.

By applying this approach Elementis has integrated corporate standards in China in what is believed to be an atmosphere of respect and commitment from all parties. It is however a two way process. Learning from China is being incorporated into corporate practice elsewhere in the company. As a result, a high level of corporate social responsibility is maintained consistently in the company: worldwide.

Experience, however, is never complete. As a final caveat on cultural hazards, Western expatriates in China sometimes say:

After a week in China you can write a book,  
After a month you can write a chapter,  
After a year you can write a page.

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### APPENDIX A – ELEMENTIS

Elementis was created from Harrisons & Crosfield (H&C) in 1998. H&C had a long association with Asia, in particular plantations and a proprietary rubber production process (Linatex) in Malaysia. Today Elementis plc is a specialty chemicals company manufacturing in the UK, US, The Netherlands, China and Taiwan. Although a UK registered plc with its head office in London the company's business team is now based in the USA at Hightstown, NJ.

The company started manufacturing chemicals in China at the end of 1997. Since then the company has gained experience from two joint ventures (one of which it subsequently bought out), acquiring two existing manufacturing sites and building a brand new facility.

The company has a small corporate EHS team. It is Elementis policy to ensure that corporate EHS standards are applied globally and, as far as possible, consistently at all manufacturing sites. Implementation is delegated to site management but is subject to audit. Periodic visits and frequent communication provide support and experience to other sites as and when necessary during and after implementation.

### APPENDIX B – MYERS BRIGGS TYPE INVENTORY (MBTI)

Carl Jung proposed four basic functions in our consciousness: thinking, feeling, sensing and intuition, all of which we do but to varying degrees. He also used two attitudes: extraversion and introversion to characterise how people direct their energy<sup>21</sup> (in Gross, 1992). The Myers-Briggs Type Indicator (MBTI), based on Jungian psychological theory, is a practical tool to assess how people perceive and judge the world, and their preference in how perception and judgement are used (Myers & McCaulley, 1985). The MBTI allows the myriad personalities of the world to be consolidated pragmatically into 16 different types – a manageable set of different personalities that, empirically, appears to be adequate for most purposes.

The MBTI uses a questionnaire<sup>22</sup> to establish the preference a person has in how they perceive things – either by sensing (S) based on experience, or by intuition (N); and

how they judge that perception – either by analytical thinking (T) or by feeling (F). It also assesses which of the perception (P) and judging (J) stages receives the most attention; and finally how the person exhibits their preference to the outside world – as extravert (E) or introvert (I) (Myers & McCaulley, 1985).

Scores from the questions result in a spectrum of degrees of intensity, but the MBTI forces a bi-polar result in each of the four dimensions to give each person a 4-letter description of their type e.g. ESTJ, ISTJ, INFP. None is considered better than another. A strength of the MBTI technique lies in its ability to see whether someone is likely to suited to a particular type of work, or as is suggested here, to help to understand how people are likely to think (on average).

What has been done for Chinese speakers appears to be with foreign language students who can understand the English form to be used.<sup>23</sup> In Taiwan, a study of English language students found all 16 types present, but most common were ISFJ, ISTJ, ESTJ, and INTJ – predominantly introverts (61.4%) (Jones & Wang, 2004). This can be compared with foreign language students in US who were found to be predominantly INTP (Moody, 1988) or INTJ (Ehrman & Oxford, 1995).

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<sup>21</sup>For Jung “consciousness was the first of three interacting levels that form our personality or psyche. The other levels were “personal unconscious” (such as things that are repressed or forgotten, and complexes) and the “collective unconscious” (things stemming from our ancestral past).

<sup>22</sup>The questionnaire is copyright and must be administered by a trained practitioner.

<sup>23</sup>It is understood that a Chinese version is also available.