

# ALPHA

THINK QUALITY

01/2022



## SUSTAINABLE CONFORMITY ASSESSMENT AND CERTIFICATION IN A MODERN WORLD

The ALPHA customer magazine that shows you how to achieve compliance and safety in a global context of a fast-moving world in a compliant, transparent and sustainable way.

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HYDROGEN**

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EDITORIAL

Dear customers from all over the world, employees and long-time friends of ALPHA. You are holding the first issue of our customer magazine "ALPHA – THINK QUALITY" in your hands. Our magazine is intended to show how international standardization, innovation and our work as an engineering and certification service provider are connected in a multifaceted interrelationship. New, innovative aspects "around quality" and technical compliance are presented in our magazine.

ALPHA has made a fundamental contribution to the competitiveness of our international customers since 2007, because almost all products, components, machines and plants, their production and their services have a direct or indirect relation to our work. Our work promotes the safety of products and systems, simplifies their interoperability, contributes to legal compliance and ultimately facilitates our customers' market access into international markets. Ultimately, we ensure not only technical compliance, but also innovation and new developments.

The first issue of our customer magazine also takes these aspects into account. Normative topics such as the functional safety of hydrogen or a guide to CCC certification in China are supplemented by the latest topics on the quality infrastructure and regulatory framework in Russia or guidelines for the conformity assessment of your machines and systems in Asia.

Sustainability is important: The main article of our magazine presents how sustainability in supply chain and sourcing in the machinery and equipment industry can be achieved according to the regulatory framework. Another important guest article deals with the funding conditions of GIZ.

You should also get to know us a little better. Exciting articles about our staff in the international ALPHA team complete the picture.

Of course, we cannot show everything: For example, not the conferences we organized on harmonization of technical regulation, our active leadership and participation in international economic committees and

in standardization committees, our international consulting projects or important technical publications, the extension of our portfolio to quality issues in welding or IT security. All this then remains reserved for the 2nd edition. We would like to encourage you to understand quality and technical compliance as a tool for a real competitive advantage. For the implementation we as ALPHA team are pleased to be at your disposal with our expertise and knowledge. We always consider and practice "Think Quality".

We hope you enjoy reading our magazine and wish you new and innovative insights.

Yours sincerely,  
Dr. Thomas Krause (CEO – ALPHA)



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# FUNCTIONAL SAFETY HYDROGEN

## TOWARDS FURTHER HARMONISATION OF HYDROGEN APPLICATIONS USING THE EXAMPLE OF FUNCTIONAL SAFETY OF PLANTS AND EQUIPMENT IN EUROPE AND RUSSIA

The increased emission of greenhouse gases is forcing climate change worldwide. An important question is how to reduce emissions of harmful substances. This is one aspect of the Paris Agreement, which sets very ambitious climate targets, for example, to reduce greenhouse gas emissions by 80 to 95% by 2050 compared to 1990 levels and, at best, to achieve climate neutrality. To achieve this goal, alternatives must be found and expanded. This also plays an important, if not decisive, role in the production of hydrogen, which as a future energy medium plays an important role in reducing CO2.

**But is hydrogen really the future energy medium? What regulations do already exist for the hydrogen economy?**

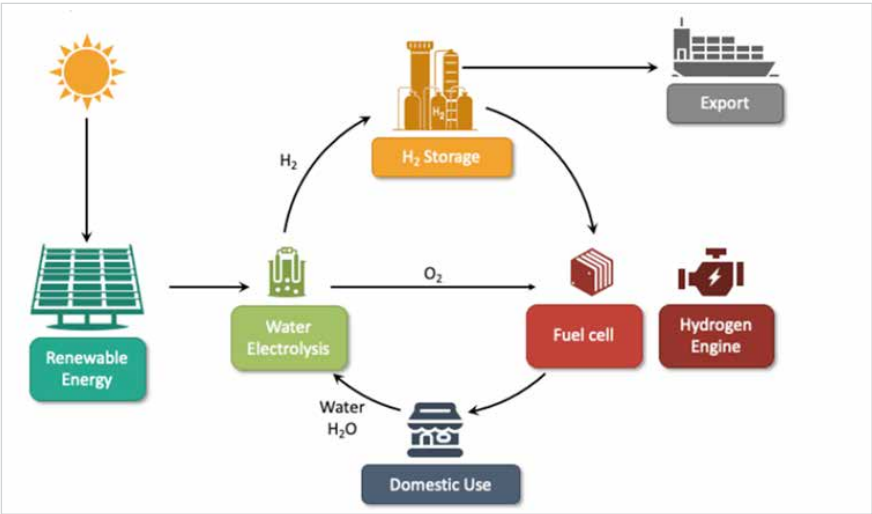
These two questions will be presented in this article using the examples of the EU and Russia. The reason is up-to-date: In the discussion about Nord Stream 2 and alternatives to coal or nuclear power generation, the hydrogen industry is repeatedly referred to as the “cure”.

Looking at the typical value chain of a hydrogen-oriented economy, i.e. production (steam reforming, electrolysis), transport and storage, distribution and use, e.g. in electricity/heat (fuel cells) drive, heating), for synthetic fuels as diesel or paraffin substitutes or also as a substitute for raw materials/fuel sources in industry (plastics, steel production), it is noticeable that these sound very good in the model approach, but that various hurdles to their use arise, such as availability, the slow planning and approval procedures or also cost control.

By the way, hydrogen is not “produced” in any of the processes, but hydrogen molecules are split off or released from hydrogen-containing chemical starting compounds. By far the most commonly used process is steam reforming. This is a multi-stage process in which hydrocarbons (mainly natural gas) are reacted with steam at high pressure and temperature using catalysts. The result is hydrogen (H2) and carbon dioxide (CO2) – the latter even in relatively high quantities.

Hydrogen from water electrolysis by means of various processes (e.g. alkaline electrolysis (AEL) or PEM electrolysis) is expected to play a major role in the future. Water (H2O) is in each case split into its components hydrogen and oxygen in an electrolyser using electric current. However, this process is expensive and it is estimated that it will only be worthwhile if the energy prices of – mind you, green – energy production fall.

Here is a simplified example of a renewable energy value chain:



Another problem is the “colour theory” of hydrogen. This also has an effect on the regulation of hydrogen production, for example I propose here a “certificate of origin of hydrogen” with international rules. To explain my point: Many outsiders think that hydrogen really has a colour, but the colouring is a model attribution of the energy source:

Green hydrogen, at the centre of the efforts of the Federal Republic of Germany, has a very positive CO2 balance, as it is produced exclusively from renewable energy sources, e.g. through biomass or electrolysis of water by electricity from alternative energy sources such as wind or sun.

Yellow hydrogen is produced by electrolysis from an energy mix. Grey hydrogen is produced from fossil fuels, primarily from natural gas by steam reforming and, like brown hydrogen from coal, has a very poor CO2 footprint.

»

Blue hydrogen is mostly produced from natural gas. However, the CO2 produced is captured and stored by Carbon Capturing and Storage (CCS) (for example by pressing it into disused natural gas reservoirs) or captured by Carbon Capturing and Utilisation (CCU) for use in other chemical processes.

Pink (red) hydrogen is produced by electrolysis from nuclear electricity. After this enumeration, one understands that the “pure colour theory” is a model of thought whose implementation in Europe – but also in other countries – is still waiting, because criteria such as CO2 footprint (green versus pink hydrogen, potency of combustion of blue hydrogen) are not too easy to separate.

Another technical challenge is the functional safety of hydrogen chain plants. Hydrogen is odourless and colourless and can form a dangerous mixture with oxygen or air – special attention must be paid to this. The opinion is often expressed that one only needs to use the existing pipeline to transport hydrogen to Europe quickly and easily, for example through existing plants and pipelines. This idea sounds ingenious and can be implemented quickly, but the properties of hydrogen (danger of

explosion, pipelines quickly become brittle, unregulated level of admixture), the cost wave (costly conversion of the machines and plants used and increasing energy consumption after their conversion) or also the fact that many energy grids in Europe are not designed for a hydrogen mixture or in order to save emissions the smart grid problem is an open one.

In addition, there is another aspect that hardly plays a role in the political discussion: Electrolysis gas is difficult to store and transport: Due to its small molecular size, the gas diffuses through or into materials and causes leakage or embrittlement. Storing and compressing it as liquefied gas requires temperatures of over - 250 degrees, which in turn results in increased energy consumption. Therefore, not only must modernisation take place, but also regulation, namely from a functional and regulatory point of view.

I would like to mention one last aspect: Most countries have initiated and developed a national hydrogen agenda. However, the pace and the level of implementation are developed differently. In the National Hydrogen Strategy of the Federal Republic of Germany, concrete plans and goals are named, above all the

preference of green hydrogen and a quality infrastructure is called for (p. 8, [https://www.bmwi.de/Redaktion/DE/Publikationen/Energie/die-nationale-wasserstoffstrategie.pdf?\\_\\_blob=publicationFile&v=20](https://www.bmwi.de/Redaktion/DE/Publikationen/Energie/die-nationale-wasserstoffstrategie.pdf?__blob=publicationFile&v=20))

Russia, on the other hand, in its strategy (No 2162 of 05.08.2021) pursues the approach of the CO2 footprint rather than the “pure colour theory”; more precisely, pink hydrogen is also considered to be climate-neutral. What is important for our consideration, however, is that this Duma document also places strong emphasis on the development of a quality infrastructure.

This should also be a starting point for future cooperation between Germany, the EU and Russia, because it is obvious that existing infrastructures (pipelines, compressor stations, storage facilities) can be used, of course after a technical upgrade. To this end, Europe and Russia should hold talks with all parties involved, including Ukraine, in order to create a win-win situation for all parties.

**Around the world, the problems are the same and the goals are different, as a study by the World Energy Council 2020 shows:**

	EU	DE	NL	FR	ES	IT	UK	NO	CH	UA	RU	JP	KR	CN	AU	CA	MO
Hydrogen use sectors																	
Industry	▶	✓	✓	✓	✓	(✓)	✓	✓	✗	✗	✓	(✓)	✗	✗	✓	(✓)	✓
Power	▶	(✓)	(✓)	(✓)	✓	(✓)	✗	✗	✗	✓	✓	✓	✓	✓	✓	(✓)	(✓)
Transport	▶	✓	✓	✓	✓	(✓)	✓	✓	✓	✓	(✓)	✓	✓	✓	✓	✓	(✓)
Buildings	▶	(✓)	(✓)	(✓)	(✓)	✗	✗	✗	✗	(✓)	(✓)	✓	✓	✗	(✓)	(✓)	(✓)
Export	▶	✗	✗	✗ <sup>1)</sup>	✓	✗	✗	✗ <sup>2)</sup>	✗	✓	✓	✗	✗	✗	✓	✗	✓
✓ main sector    (✓) less relevant    ✗ not addressed																	
1) Hydrogen imports transit to other counties (e.g. Germany) considered. 2) For Norway, hydrogen is not targeted for direct export, but indirectly through the export of NG with local CCS.																	
World Energy Council, 2020																	

A quick check shows that the industry and mobility sectors play the most important role in the national hydrogen strategies, i.e. those sectors that are highly regulated.

## ASPECTS OF FUNCTIONAL SAFETY IN EUROPE

Hydrogen is presented in many media as the “wonder product”, but what is the actual situation with regard to functional safety?

Certification experts are particularly interested in what standards do exist in Europe to reflect the special nature of hydrogen, because its properties are not inconsiderable.

National and international standardisation committees and experts, such as the VDE DKE or the IEC around Thorsten Arnhold, began early on to standardise aspects of functional safety, to define minimum technical requirements and to maintain a certain level of safety.

For example, the DIN EN 60079 series of standards deal with the many additional measures for the installation

and safe operation of electrical systems in potentially explosive atmospheres.

In Europe itself, the standards are driven by two committees, the ISO Technical Committee for Hydrogen Technology (ISO / TC 197), which deals with the standardisation of systems for the production, storage, transport, measurement and use of hydrogen, and the European Committee for Standardisation (CEN), which works on European standards (EN) for materials, services and processes.

Examples are ISO 14687:2019 “Hydrogen fuel quality - product specification” or EN 1712:2018 (update pending) “Hydrogen fuels – product specification and quality assurance – application in proton exchange membrane (PEM) fuel cells for road vehicles”.

Here, however, the functional aspects of a range of applications are described. But how does it look in the area of machines and plants?

**An overview of the valid norms and standards can be presented in this way:**

### NEW AND UPCOMING STANDARDS

IEC TC 105: Fuel cell technology  
IEC 62282 -3-100 (September 2020): Safety of stationary fuel cell systems  
IEC 62282 -5-100 (Mai 2019): Safety of portable fuel cell systems  
2021 ( new): Safety of fuel cell modules  
ISO TC 197: other aspects of value chain

ISO / TR 15916 (2015). Basic consideration for the safety of hydrogen systems (new 2022 ISO TC 197)  
ISO 22734 (September 2019): Hydrogen generators using water electrolysis – industrial, commercial and residential applications  
ISO 1988 -1 (March 2020): Gaseous hydrogen – fuelling stations

IEC TC 31: Explosion protection  
IEC 60079 -10-1: Zone classification  
IEC 60079 -17: Installation in hazardous zones  
IEC 60079 -17: Regular inspection and maintenance  
IEC 60079 ff and ISO 80079 -38 ff.: Realisation of explosion protecting equipment

In blue I summarise the existing norms and standards for fuel cell technology, in green questions of hydrogen production and storage and its systems, in red the use of the equipment and components under the special characteristics of hydrogen, namely in a potentially explosive zone.

This overview shows that important efforts are being made in Europe and internationally for technical regulation, but that even more needs to be done here for functional safety in order to operate plants and systems safely from generation to transport to storage and use.

## ASPECTS OF FUNCTIONAL SAFETY IN RUSSIA

The Russian Federation can of course only be seen in the context of being a member of the Eurasian Union. The national hydrogen strategy No 2162 of 5 August 2021 shows many similarities with those of the European countries, but the focus is clearly placed on the CO2 footprint and pink (red) hydrogen, i.e. hydrogen produced from nuclear power, is explicitly highlighted as a tool for CO2 neutrality. However, with regard to the Russian national strategy, it is noticeable that efforts for technical regulation and standardisation are explicitly emphasised. In the GOST system, there are some standards that define the aggregate state and purity of hydrogen, resulting from the long experience of production in Russia.

- **GOST 3022-80:**  
Technical use of Hydrogen
- **GOST 56248-2014:**  
Liquid Hydrogen
- **GOST 51673-2000:**  
Pure gaseous hydrogen

The corresponding hazard class is specified in GOST 12.1.007-76 as low hazardous and the warning label is regulated according to GOST 31340-2013.

Functional questions of the equipment are covered by TR CU 010/2011, TR CU 012/2011 or for pressure vessels and pressurized equipment by TR CU 032/2013. Here, however, as in Europe, the question arose as to whether these really reflect the degree of danger posed by hydrogen.

It is important to know that in Russia the technological regulations for the production and application side have also been regulated for a long time, for example for pyrolysis (GOST 14710-78) or for hydrogen generators (GOST 5411-2010).

As it is well known, the quality infrastructure in Russia is different from

that in Europe, but large Russian companies such as Gazprom, Novatek or Rosatom are actively involved in the Russian standardisation commissions, because the economic pressure is high and exports are only possible if the technical regulations can be adapted to Europe and other regions of the world, as the unresolved example of the smart grid more than clearly shows.

### SUMMARY

This short overview and a comparison of the aspects of functional safety between Germany / EU on the one hand and Russia / the EAEU on the other hand shows the strengths but also the weaknesses of technical regulation. But how can the objectives – as different as they are – be implemented, since we nevertheless (despite all political differences) have a European and global interest in reducing greenhouse gases?

**In this regard, I would like to highlight the following important aspects:**

1. Increasing market opportunities with a uniform approach and the comparability of functional safety in order to increase mutual market access.
2. Within the framework of the Green Deal, questions of market rules that enable the use of hydrogen (hydrogen infrastructure, gas regulations for decarbonised gas markets) must also be discussed and regulated.
3. As this study on Russia and Germany has shown, there are different international views on how to achieve climate neutrality, which are discussed without taboos and ultimately need to be regulated by consensus.
4. The updating, harmonisation and supplementation of existing laws and regulations must be given priority. Networking of international committees could help here, as well as harmonisation of selected

standards in the area of functional safety (sensors for hydrogen detection, ASME standards for hydrogen piping, such as ASME B31.12-2019 or ASME STP-PT-006-2017 for the design of hydrogen pipelines). For example, the German-Russian commission “Hydrogen and Sustainability” is trying to implement this.

5. Most importantly, the development of hydrogen-specific international regulation is a key in the approach to review existing laws and standards and to create technological certainty for the international hydrogen industry. Only in this way can our goal of climate neutrality be achieved together, because it concerns everyone.

#### Another important addition:

ALPHA is working mainly in the field of functional safety and regulation issues of hydrogen in many countries in Europe and Asia, in the implementation in Europe, but also in Russia (GOST, TR CU), China (GBT/T, SELO, CCC), Uzbekistan (UzTR, MTR) and other regions of the world.

Feel free to contact us if you have any questions, comments or specific implementation projects in the functional safety of hydrogen applications. We will be happy to help you find the best and most compliant solution.

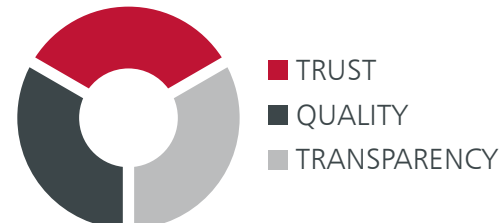
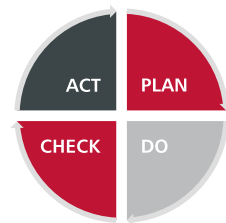
Dr. Thomas Krause



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CEO ALPHA CONSULTING GMBH



## SUSTAINABLE SUPPLY CHAIN MANAGEMENT FOR PLANT ENGINEERING & CONSTRUCTING COMPANIES



### Our competencies:



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The requirements for **sourcing** and **supply chain management** are becoming increasingly complex and riskier. In addition, there is increasing internationalization and cost and time pressure, which often comes at the expense of a planned approach. The important issue of sustainability is playing an increasingly important role.

A COMPLEX AND HOLISTIC SOLUTION OFFERS YOU

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### Our concept consists of the following key points:

1. evaluation and management of your supplier portfolio with regard to economic efficiency and social and ecological performance potential
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3. analysis, standardization and continuous improvement of your purchasing processes
4. quality assurance of your outsourcing activities
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6. need-based training for your employees
7. increasing the value of your processes through sustainable purchasing strategies

We show you potentials and solution approaches for the optimization of your supply chain management and sourcing activities and thus also the assurance of a holistic sustainability of your company.

# TOWARDS SUSTAINABILITY IN SOURCING

## AND THE ROLE OF TECHNICAL COMPLIANCE FOR THE SUCCESS OF SOURCING DECISIONS

The Sustainable Development Goals (SDGs) agreed in Paris in 2015, as well as the EU Green Deal and society's increasingly perceived urgency for sustainable solutions, are contributing to many companies looking for new approaches and adapting their own purchasing processes to modern requirements. The Corona Pandemic additionally is redefining many areas of business processes: creating new business models, new working environments and new supplier relationships. Risk management strategies are rewritten, companies develop politics to reduce risks from global Supply Chains, create new purchasing strategies considering specific national regulations and international dependencies rethink their buying decisions paying attention to sustainability issues and the whole life cycle of a product or service at offer.



Figure 0: The Sustainable Development Goals

### THE NEW ROLE OF SOURCING

Sourcing has a huge power to push the aspect of sustainability into both direction: up – from suppliers and through their own manufacturing down to the customers, as they act as an enabler for both parties, helping each other to identify and to promote the ideas on Sustainable products and services.

**The sourcing department is no longer just an executor of orders; it has a more powerful strategic role.** Knowing the suppliers landscape and suppliers' new technologies and innovations it can boost its own R&D's ideas to create

a more sustainable product for the customer, considering the abilities and advantages of existing and yet to be developed Supply Chains. Sustainability has various aspects, and those 17 SDGs refer to three pillars: the environmental, the social and still the economical one. All of them are equally important and should be considered.

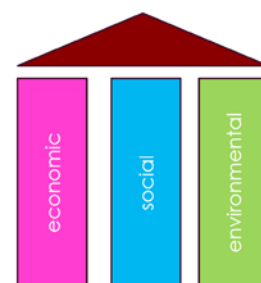


Figure 1: Three Columns of Sustainability

### 1. HOW SOURCING CONTRIBUTES TO THE ECONOMIC ASPECT OF SUSTAINABILITY

The efficiency and profitability of various purchasing strategies are at the forefront of many corporate decisions. This aspect of Sustainability is not so popular among "environmental activists" as it is associated with financial power, which has for some change makers not the priority as other two aspects. However, to be able to provide those innovative solutions for environmental support we need companies with strong financial background to be able to invest, to contribute and to develop.

Every buyer should know that **a procurement decision is always to be made according to a total cost approach** and not according to a provided offer. For years, purchasing has been guided by the so-called TCO (Total Cost of ownership) approach, in which costs should be taken into account along the entire supply chain and throughout the entire product life cycle - from purchase all the way through putting it into operation, up to disposal, although the last one was usually not on focus of the most sourcing strategists.

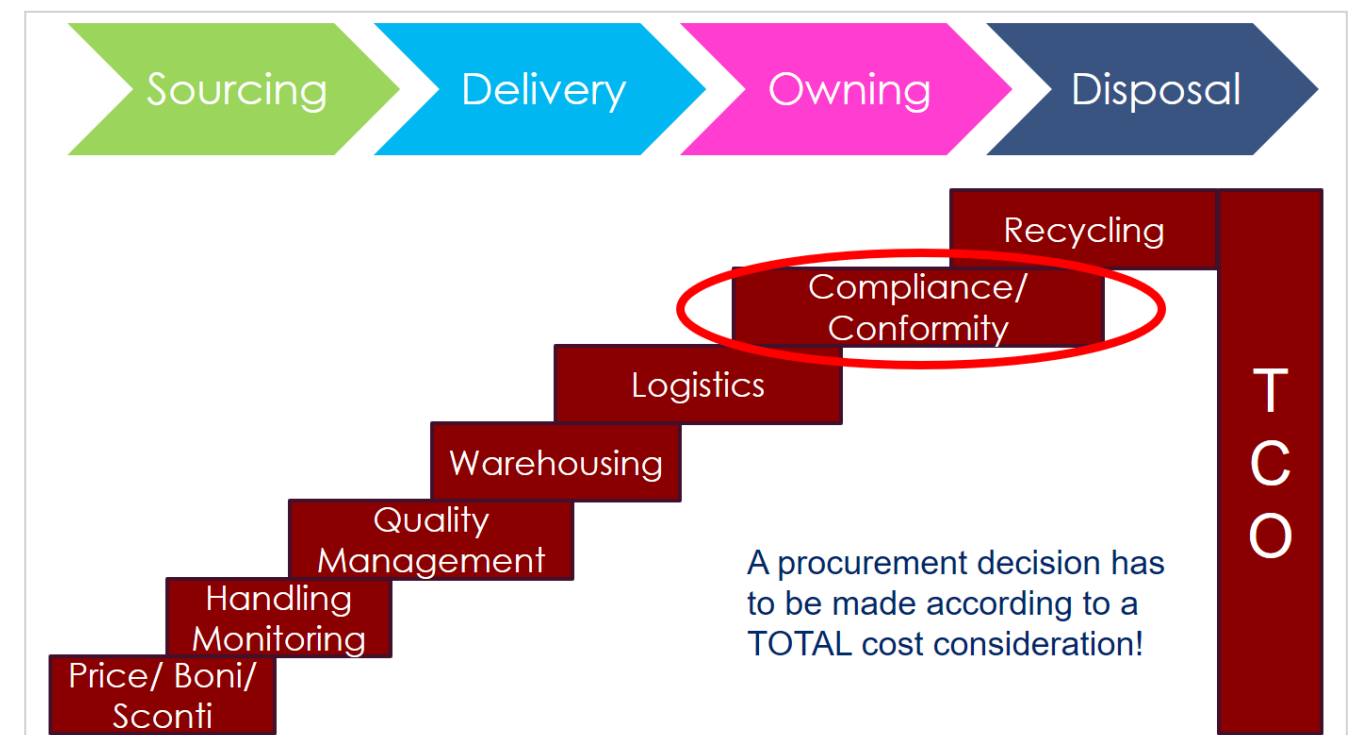


Figure 2: "The total cost of Ownership" - Concept

A number of factors has to be considered during those decision-making processes in sourcing: the availability of the products, the requirements or wishes of the partners involved (sometimes the end customer has his favourites), the quality, regulatory framework, innovations, technologies or collaboration agreements between various stakeholders.

Moreover, the question of buying locally or globally is on the agenda of all purchasers nowadays, because of possible political requirements or also conveniences in the logistics and documentation. Local products might be more cost-extensive than those from established partners from international markets and risky, as one might have no good relationships with new possible suppliers and no experience with quality and reliability of the possible local partner. Moreover, choosing a local partner creates usually a temporary relationship for the time of the project being and there are usually no incentives to invest into the relationship just for one project.

**But to make the right decision the aspect of REGULATORY FRAMEWORK should not be neglected or underestimated.** Many compa-

nies report bureaucratic procedures at the borders during customs clearance and commissioning of products bought on international markets: the local authorities and institutions would ask for additional documents, delay customs clearance, require further proofs, arrange for product tests and otherwise "delay the processing of the projects through numerous requirements".

This example is a perfect illustration of what is often overseen in purchasing. These requirements, which entail additional activities and thus exceed the time frame and ultimately the costs of the projects, are the aspects that arise from the issue of TECHNICAL COMPLIANCE, the topic that is unfortunately still missing on the checklists of many purchasers. Technical compliance concerns multifaceted topics of the quality infrastructure, such as conformity assessment, registration of products, providing technical documentation with calculation, risk analysis and test protocols in compliance with Technical rules, as well as getting permission to bring products on the market and to put them into operation, esp. at facilities requiring monitoring, like e.g. mining, oil and gas, petrochemical and chemical industries.



Figure 3: Fields of Technical Compliance

Despite numerous harmonisation efforts in various institutions and initiatives, there are still some differences that are reflected in various sets of rules and regulations and that have to be taken into account while purchasing, producing, delivering or commissioning a product. Those differences require CONFORMITY ASSESSMENT procedures carried out by an accredited body in the target country, as in most cases neither the results of the national certification bodies nor the national laboratories are recognised among each other.

This means that an internationally operating product manufacturer has to apply for conformity assessment

procedures, including product testing and auditing of manufacturing facilities in order to obtain a certificate or an approval for the delivery of the product, a system, or the whole plant to the respective destination. Moreover, depending on the complexity of the product, several audits from different testing bodies in one country may be required.

In order to make the right decision in purchasing today, it is crucial to know what country is the final destination for the product to be purchased and **what norms, standards and requirements prevail in the target country with regard to approval, certification, authorisation, registration, possible calibration, testing, as well as the documentation to be supplied. Only by taking this into account is it possible to make a qualified enquiry to possible suppliers and qualitatively evaluate their offers** and ultimately conclude whether the price offered is the final one or whether Conformity assessment costs should be included and considered for further procedures.

The identification of all these requirements and the implementation of these regulations therefore should not start with the delivery of the finished products, but already in the purchasing department, or even earlier in the planning of the Supply Chain Management activities.

Here, **the purchasing department is given a significant role in interdisciplinary teams with manufacturing, planning, quality management and logistics** – various requirements of a technical nature must be identified, procured, communicated accordingly to the relevant parties along the entire supply chain and their compliance monitored so that all costs and deadlines can be taken into account, contracts with suppliers can be formulated correctly and products to be delivered can be manufactured, accepted, marked, packed, shipped, cleared through customs and commissioned IN ACCORDANCE with

the requirements of the destination country.

A holistic technical compliance strategy in purchasing enables the successful handling of international projects and contributes to the efficiency of corporate processes and the economic aspect sustainability.

## 2. HOW SOURCING CONTRIBUTES TO THE SOCIAL ASPECT OF SUSTAINABILITY

Sourcing is also a vital driver for the social aspect of Sustainability across the whole Supply Chain.

Talking about social aspects we think first of all of Supply Chains Act that focuses on responsibility of every producer for their suppliers in terms of

- a) Compliance with human rights,
- b) no slave and child labour,
- c) no social injustice,
- d) reasonable working hours and safe working conditions, as well as acceptable wages.

This is usually done by avoiding all kind of violation of basic human rights and supporting the “good” approach by pushing the idea of social justice in communication and through actions.

Open (formal and informal) communication between suppliers and customers, as well as different partners in the supply chain, including interaction via social media platforms might help participants of a buying process to make a clear picture and therefore to contribute to a better decision, but also to influence or better to inspire other stakeholders to follow your sustainability way, i.e. **to educate and to develop your partners to the desired “standard”. This is a new strategic approach that sourcing might apply to move the whole Supply Chain and businesses across onto the Sustainability path.**

This is a challenge and a chance for companies on both sides to inform and get informed about strategies and actions of partners before going into negotiation or signing a contract.

## 3. HOW SOURCING CONTRIBUTES TO THE ENVIRONMENTAL ASPECT OF SUSTAINABILITY

There are some ways for sourcing departments to implement environmental aspects of Sustainability into buying procedures.

The first one is the material of the product. It is important to verify that the material of a product has a sustainable source and that this one is the best available. Titanium or fibre-glass plastic – the options should be reflected from different sides: not just the scarcity and costs of the material, but also handling of the substance, additional procedures of accepting, conformity assessments, logistics opportunities and requirements, the service life, and the possibility of returning it back to the ecological or technical cycle.

Another crucial area to consider while negotiating for products is the design. Talking about design it is important to see the whole picture up to the end of service and to clarify whether the product can be dismantled into different parts to be used in other products and whether the supplier is ready to get the product back if it is of no use anymore to the customer and in this way avoid any waste and contribute to the circular economy.

But also logistics organisation should be reflected upon while making a decision in favour or against a product. Let the supplier deliver just in time, which allows to do without storing facilities and in such way to save energy and CO<sub>2</sub>, as well as costs for construction, operation, and main-

tenance of the building? Or buy in bulk for the whole year to store and at the same time to reduce the price for each time, and energy and costs for possible repeated delivery? To answer those questions a holistic approach should be used to consider all the factors for the best possible solution.

## CONCLUSION

The drivers of the sustainability in Procurement might be

- a) of an external character, like pressure from customers, public, government, regulators or just the desire for a positive image,
- b) of internal one, like personal commitment of Sourcing managers and company leaders and the wish to cut costs by reduc-

tion of pollution or of waste – at the source and afterwards and to improve the quality through decrease of environmentally harmful products, increase of recycled and reused products, avoidance of unnecessary packaging, through the use of biodegradable, recyclable, returnable packaging, reuse of packaging (pallets, containers), substitution of materials with sustainable alternatives

Every stakeholder of the society, every department in a company or any institution and of course every buyer, who is at the front of every Supply Chain, has to reflect their activities from those three pillars of sustainability to ensure the holistic approach that would consider all stakeholders, functions and activities and thus benefit the performance of the

company and development of our society towards sustainable future. The communication of the issue of Sustainability along the entire supply chain is also crucial for the implementation of the idea; as a business can be as sustainable as sustainable is the whole Supply Chain. Therefore, **open, transparent and forward-looking communication with all members of a supply chain is an absolute must!**

In addition, establishing a culture of supportive cooperation towards achieving of 17 Sustainability Development Goals by providing environments for all participants of SC to learn and to implement the ideas is the prerequisites of every success!

Prof. Dr. Julia Krause



## PROF. DR. JULIA KRAUSE SHORT BIOGRAPHY

Julia Krause holds the professorship for International Industrial Sourcing & Sales at the University of Applied Sciences in Dresden and deals in teaching & research with questions of holistic sustainability in corporate processes & efficient organisational management. These interests are based on her extensive experience in management consulting and international plant engineering business. Julia Krause holds Bachelor in Education, Diploma in Philology, Master in Economics with focus on Production Management and numerous further qualifications from different universities worldwide, e.g. Sustainable Supply Chain Management from Cambridge University or International Business from University of London.

Julia Krause heads the Quality Infrastructure Working Group in the initiative for Technical Regulation in the Eastern Committee of German Businesses and works on TR-Projects with Society for International Cooperation (GIZ) in Central Asia. With her “Nightingale” project, she advocates the implementation of sustainability goals in various steps of global investment projects.



# EXPLORING OPPORTUNITIES FOR NEW MARKETS

## AND IMPLEMENTING INNOVATIVE IDEAS INTERNATIONALLY WITH GIZ

On behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), BS4D in Saxony provides advisory services to organisations of the German business community and their member companies with the aim of actively using the existing development cooperation (DC) instruments to support, finance and secure investments and business in developing and emerging countries by means of a stronger link between foreign trade promotion and development cooperation.

Between 04/17 and 06/21, BS4D has advised around 200 companies and business associations in individual and multiple consultations, directly in their companies.

### The services of the Business Scout include:

- » Information and advice on cooperation opportunities between the private sector and German development cooperation.
- » Arranging contacts to international and local networks as well as institutions of DC or the private sector.
- » Information on market potential in developing and emerging countries as well as offers on funding programmes and financing partnerships.
- » Planning and implementation of low-cost workshops and business trips.
- » Development of specific projects and active assistance with implementation on the ground.
- » Cooperation with the BMZ's "Agency for Economic Cooperation and Development" (AWE) in Berlin.

The "develoPPP.de" programme is

a priority funding programme in development cooperation, particularly in Saxony.

### Within this programme, development partnerships with the private sector are promoted:

- 1) DeveloPPP Ventures: for small-volume pilot projects with a funding amount of up to 100,000 EUR have just been piloted.
- 2) DeveloPPP Classic: with a possible funding amount of up to 2 million EUR.

The BMZ covers 50% of the costs of the agreed DeveloPPP project, the equivalent of the other 50% can be compensated by the respective company with its own services.

At present, 20 projects by Saxon companies are being implemented under the "develoPPP.de" programme.

Particularly pleasing is the fact that the number of member companies from the Chemnitz Chamber of Industry and Commerce that have won **tenders** or are applying for DeveloPPP projects has increased.

ALPHA is a flagship project holder here: in record time, the demanding DeveloPPP.de project, "Improvement of technical regulation for the operation of industrial facilities in Uzbekistan and Kyrgyzstan" with a duration of 3 years, was developed, approved and implemented. BS4D has supported the process from the first consultation to the commissioning.

As one result, the regulation of industrial safety of plants, esp. in the oil/gas, petrochemistry and mining sectors could be improved and recommendations for harmonisation

of international standards to state authorities could be published. However, other important regions are also in the focus of the programme, e.g. Africa.

In January 2019, the Chemnitz Chamber of Commerce and Industry and the GIZ Scout successfully organised and carried out an entrepreneurial trip to Ethiopia consisting of 12 Saxon companies and 19 participants.

The "German-Ethiopian training project" is exemplary here: The business trip to Ethiopia in 2019 and the permanent support provided by the business scouts led to the Chemnitz-based company Texulting GmbH developing the concept of the "German-Ethiopian Textile School" in March 2020, which led to the application for an association partnership between the "Association of the North-East German Textile and Clothing Industry" and the Ethiopian Textile Association.

**Competent and reliable partners are essential when opening up and stabilising markets. Business exchange and networking are important success factors and have become a trademark in BS4D's activities. With this objective we planned a business trip to Kenya for October 2021. Unfortunately, the trip was cancelled due to continuing Covid-19 pandemic.**

BS4D has been able to deepen its

good relationship with many companies in its network in the region. This gives it the opportunity to respond to enquiries at short notice and to initiate network cooperation.

Of course, the acquisition and improvement of contacts in 2020/21, which could only take place virtually, suffered as a result. In order to maintain contact with the SMEs nevertheless, I conducted two expert surveys in my function as a GIZ scout, firstly on the negative con-

sequences of the Corona pandemic and secondly on the affinity of the companies with regard to the use of our DeveloPPP.de. The results will be published shortly.

In July 2021, we have started a new project in the framework of GIZ with ALPHA: Creation of a substitution strategy for sustainable water supply in Ukraine. Using the city of Lviv as an example, strategies for the technical implementation of sustainability concepts are

to be realised together with our Ukrainian partners.

My thanks go to the CEO of ALPHA, Dr Thomas Krause, in particular to him for his initiatives and innovative ideas and public relations work, which ensure that the importance of the DC programmes, for the Saxon economy, is repeatedly demonstrated.

Dr. Konstantin Kotsas



### DR. KONSTANTIN KOTSAS BUSINESS SCOUT FOR DEVELOPMENT (BS4D) – IHK CHEMNITZ

Dr. Konstantin Kotsas was born in Greece in 1956. Studies and doctorate in chemistry at the University of Ulm, followed by international consulting activities in the petrochemical industry. Since 1997, he has held various positions at GIZ, focusing on the development of qualified personnel, sustainable management and foreign trade development in Russia, Central Asia and the Caucasus region. Since 2016, he has worked as a EZ-scout at the Chemnitz Chamber of Commerce and Industry. Dr. Kotsas lives in Frankfurt /M and Chemnitz.

### WE OFFER SERVICES FOR THE FOLLOWING REGIONS





# CCC: YOUR ENTRY INTO THE CHINESE MARKET

Even during the COVID-19 pandemic, China's total exports and imports from January to October 2021 still amounted to 4.89 trillion USD. How can you enter a market of 1.4 billion people?

Against the backdrop of global trade being severely hit by the pandemic, bilateral trade between Germany and China exceeded €210 billion in 2020, up 3% year-on-year. China has been Germany's most important trade partner for five consecutive years and is the second largest export destination for Germany. At the same time, Germany is China's largest trading partner in Europe. In the first quarter of this year, Germany's exports and imports to China increased by 22.3% and 24.6% respectively year-on-year. When entering Chinese customs, all products including their certificates will be checked. How do you know if your products require a certificate? Here is a brief introduction to the Chinese certification system.

## "Is there something similar to CE for the European Union or the EAC for Eurasian Economic Union in China?"

Just as products need to obtain the relevant certifications to enter Europe, the USA or EEU member countries, different products need to obtain corresponding licenses in China. After decades of development, China has gradually formed its own unique certification system. All regulations related to certification and accreditation are issued by a department named State Administration of Market Regulation (hereinafter referred to as SAMR). To some extent, all certificates for China can be called „SAMR licenses“. You might have encountered abbreviations such as CCC, Selo, PAC etc. These are, however, only further names for different products issued by diverse authorized certification bodies. But what are they? Which one is necessary for your products?

## "What is CCC – Is it the Chinese equivalent to CE?"

Not exactly. Compared to CE the China Compulsory Certificate (hereinafter referred to as CCC) covers a much smaller variety of products. The SAMR has published the latest CCC-catalog in the "Announcement No. 18, 2020". The new catalog

consists of 17 categories and 103 kinds of products. According to the "compulsory product certification management regulations" Article V, products included in the "CCC-Catalog" must be certified by a state-designated certification body before factory sales, imports and their use in business activities. There are, however, some exceptions.

For example, imported products under contract, although in the CCC-Catalog, do not require CCC certification. Designated certification bodies and their authorized scope were issued by the SAMR(CNCA) in "Announcement No. 22, 2020". Different certification bodies specialize in different areas.

We, ALPHA Consulting GmbH, will help you to determine whether your product requires CCC certification, and we will help you to obtain the relevant certificate in the shortest possible time with the certification body that specializes in its field.

## What is SELO-Certification?

SELO stands for Special Equipment Licensing Office. It issues the so-called Manufacture License of Special Equipment. Unlike with CCC certification, special equipment manufacturers must apply for their licenses

directly with SELO. It is therefore often referred to as Selo-Certification. According to the "Law on Safety of Special Equipment of the People's Republic of China" special equipment refers to products such as boilers, pressure vessels (including gas cylinders), pressure piping, elevators, cranes, passenger ropeways, large rides, field (plant) special motor vehicles etc. Manufacturers must meet the requirements corresponding to the "Regulation for Production and Filling Licensing of Special Equipment" to obtain a manufacturing license. Like in the CCC-catalog special equipment also has its official definition and scope. It is the "SAMR Announcement from on Administrative Licensing of Special Equipment No. 3, 2019".

In addition to the two certificates mentioned above, there are other certificates. For example, the relatively new CCCEx certificate and the PAC certificate for imported measuring instruments. For each certificate there are differences in the corresponding requirements and considerations.

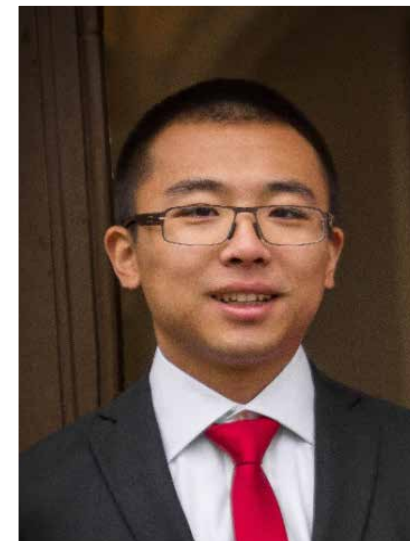
What the philosopher Heraclitus said in the West is also true for the far East: "The Only Constant in Life is Change", especially in China. The

Certification system of China is still under constant improvement. Catalogs and regulations undergo changes almost every year. Even SAMR itself is just 3 years old. It was for-

merly known as AQSIQ. We, ALPHA Consulting, can provide you with the most recent updates and the quickest assistance in finding the right certification for your purpose. We act as

a bridge between you and the China and accompany your entry into the Chinese market in the most efficient way.

Lisong Tian



## LISONG TIAN – PROJECT MANAGER

Lisong Tian has joined ALPHA GmbH in 2017 as a project assistant. In his current role as project manager, he consults companies in the field of certification for the Chinese market. With his German educational background in mechanical engineering and his Chinese cultural background he is committed to build a smooth "certification bridge" connecting Germany's and China's markets.

### EDUCATION:

**B.Sc.** Mechanical Engineering, Technische Universität Chemnitz, Germany 2020

**SFI.IWE.** International Welding Engineer, DVS Halle, Germany 2019

**B.Sc.** Industrial Design, Jiangsu University of Technology, China 2015

**B.Sc.** Financial Accounting, Jiangsu University of Technology, China 2015

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The infographic displays a grid of certification and standard categories:

- QUALITY
- TYPE TEST
- CHINA COMPULSORY CERTIFICATE (CCC)
- ELECTRICAL WIRES AND CABLES
- MEASURING INSTRUMENTS
- GB STANDARDS
- TECHNICAL COMPLIANCE
- PATTERN APPROVAL CERTIFICATE (PAC)
- CIRCUIT SWITCHES, ELECTRIC DEVICES FOR PROTECTION OR CONNECTION
- CERTIFICATION
- PRODUCT CERTIFICATION
- ELECTRIC TOOLS
- TSG STANDARDS
- EX-PROOF ELECTRICAL APPARATUS
- CONFORMITY ASSESSMENT
- MANUFACTURING LICENSE OF SPECIAL EQUIPMENT LICENSING OFFICE (SELO)
- INSPECTION
- LOW-VOLTAGE ELECTRICAL APPARATUS
- TECHNICAL REGULATION
- REGISTRATION
- PRESSURE VESSEL
- ENGINEERING CONSULTANCY
- INDUSTRY PIPING
- LIFTING EQUIPMENT
- EPC PROJECTS IN CHINA
- FIRE FIGHTING EQUIPMENT

**ALPHA**  
THINK QUALITY

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# ALPHA

THINK QUALITY

## CYBERSECURITY AS AN INTERNATIONAL MARKET ACCESS REQUIREMENT

Compliance with cybersecurity standards and norms is becoming mandatory for a majority of products in the EU, but is also a critical factor for the successful implementation of projects worldwide and export abroad. Security vulnerabilities in hardware chips and Internet routers, as well as increased reports of cyberattacks on laboratories, corporate databases and individual factories, repeatedly illustrate the point: In times of advancing digitalization, the question of securing digital systems, data centers and cloud services is increasingly coming into focus.

The advancement of Industry 4.0 concepts also contain risks: Since networked machines produce a large amount of data and these are to be sent across the world, they must logically also be adequately protected. Every network has its weak points, and these must be identified and reduced.

In this context, the automotive industry with its electronics and software as well as industrial production (mechanical engineering) and plant engineering including the critical infrastructure involved with its automation, process control and management systems (ICS) are the focus of cybercrime.

More information at: [www.alpha-consulting.eu](http://www.alpha-consulting.eu)  
or provided by contacting: [info@alpha-consulting.eu](mailto:info@alpha-consulting.eu)



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### ALPHA HOLISTIC APPROACH FOR YOUR IT SECURITY

ALPHA identifies your weak points in the IT area and develops a holistic concept to improve your cyber security, which not only affects your machinery and equipment and their associated processes, but also the human factor.

Our experts will also help you to find out and implement the relevant norms and standards in Europe, the EAWU and Asia. Especially in international business this factor will be decisive for success and failure.

#### For this we proceed in 4 steps:

##### ASSESSING

- Identify potential security risks from an organizational and technical point of view

##### MONITORING

- Effectively monitor the industrial environment, assets and connections

##### SECURING

- Mitigate identified security risks related to people, processes and technology

##### ADOPTION

- Reduce future potential risks with adoption of the identified results to the further process in the company

# 6 GOLDEN RULES

FOR CONFORMITY ASSESSMENT AND CERTIFICATION OF  
YOUR MACHINERY AND EQUIPMENT FOR EXPORT AND  
COMMISSIONING IN ASIA



■ 6 golden rules – Conformity assessment and certification of your machinery and equipment for export to and commissioning in Asia

A number of authorities and institutions around the world are responsible for protecting operators of equipment or consumers of products, as well as nature and the environment, from potential risks and damage.

It has never been more important than today to find a reliable partner with world-leading know-how, experience and resources to help you ensure the safety of your products and facilities. This is especially true for most countries in Asia, in addition to your projects in Russia and other member states of the Eurasian Economic Union.

ALPHA – as one of the leading certification, conformity assessment and engineering services companies in Europe for the Eurasian Economic Union and Asia. We offer multidisciplinary knowledge of components, materials, production processes and safety requirements to help you achieve technical compliance

to meet the stringent requirements of your target countries. With our unique global network, we can verify the quality and safety of all aspects of your supply chain - from the compliance of your planning and production processes and those of your suppliers, to pre-shipment inspection and the commissioning of machinery and equipment - anywhere in Europe and Asia.

#### Which basic certification rules do you have to observe for your projects and the export of your products to Asia?

**Compliance first! Trust the expertise of professionals and not anonymous bargain offers on the internet or non-transparent certification offers.**

Certification always has to do with trust in the project partners and testing bodies. Allegedly short routes, fast-track approvals or anonymous registrations without documents not

only pose a risk to people and the environment, but also do immense damage to the manufacturer's image and can have definitely harsh consequences for you or the signatory in your company. In Korea, quality violations or incorrectly issued quality certificates are punishable by up to 3 years of imprisonment (Occupational Safety & Health Act, Article 28). In other countries, the penalty is not regulated by law and is arbitrary (Central Asia, Vietnam), but in any case, is very risky.

As a general rule, ignorance is no excuse. Short-term savings at any price are at the expense of quality. Non-transparent agreements with authorities can lead to severe and sometimes non-transparent penalties. ALPHA helps you achieve compliance in all phases of the project to avoid these risks. This is especially true for plant engineers who face this issue almost daily, from basic engineering to commissioning support.



### Ensure that your products, machinery and equipment comply with all applicable standards and regulations.

Our expertise helps you to implement the relevant norms and standards in your project. Thus, a standard-compliant implementation, for example of the new MIGAS regulations in Indonesia (pressure vessels, safety aspects of equipment) is indispensable for compliance. On the other hand, we can help you to achieve costs while maintaining high quality, as the example of KOSHA in Korea and the knowledge of a mutual recognition of IECEx and partly ATEX certificates shows.

As a manufacturer, it is your duty to prove that your equipment and products do not pose any danger and that they meet the highest requirements of the target country.

### Minimise your risk at every stage of your project.

ALPHA's risk assessment of equipment and products can help you to identify problems, filter out hazards, identify solutions and thus meet the highest standards. In Uzbekistan, for example, it is not sufficient to manufacture your pressure vessels only in accordance with EN or PED, but the national requirements of the Uzbek Pressure Vessel Directive UzTR.427-019:2017 must also be implemented consistently, but also take into account that the old standard OzDST 1138:2017 is harmonised with GOST 52630 (EN 13445). This has consequences for the selection of suppliers, material code, type and scope of testing and documentation - ultimately impacting project time and costs as well as ensuring conformity.

### Ensure safety and quality at every stage of your project.

Our product testing and certification services help you address critical design and compliance requirements from the design phase to the end of the product life cycle. ALPHA's network includes accredited testing bodies, testing companies, and more throughout Europe and Asia.

This is especially important if you want to export to Asian countries that do not have a stable quality management system, such as Kyrgyzstan or Vietnam, or that have strong governmental regulatory requirements, which is the case in China with SELO / CCC or in Korea with KOSHA / KTL / KGS. Here, it is essential to consider quality requirements, inspections and also regulatory requirements in your project planning for each phase of the project.

### Avoid expensive project postponements and risky recalculations.

Our professional expertise, pre-shipment inspections and validation of your scope of services help you to identify possible product defects or conformity errors. These

consulting and inspection services can be provided on-site before, during and after production, for example by preparing a concept for the conformity assessment procedure of a complex plant before the start of purchasing. National differences can be worked out more quickly here, but, for example, synergy effects and thus cost savings can be achieved by pointing out harmonised norms and standards or through references to ILAC (International Laboratory Accreditation Cooperation) or APLAC (Asia Pacific Laboratory Accreditation Cooperation).

It is important to know already in the project planning phase what is in the scope of the plant constructor or manufacturer or what has to be fulfilled for your sub-contractors. This gives you planning security when, for example, you receive a tailor-made certification concept from ALPHA for your project in Kazakhstan, EAC and national standards of Kazakhstan, which includes your obligations, but also clearly and precisely those of your suppliers.

### Improve sustainability – holistically and in line with future demands.

Through our comprehensive services and advisory role, we can help you meet your social responsibility objectives, produce greener products, ensure and document the smooth management of restricted substances in your products. Sustainability and concepts such as the Green Deal are also being incorporated into the manufacturing of products. For example, a number of Asian countries from Central Asia (Kazakhstan, Uzbekistan, and Azerbaijan) to China and Southeast Asia have already adopted standards and norms to improve sustainability that go far beyond energy efficiency and whose fulfilment must be particularly obligatory for manufacturers from Europe and North America. These must be known and correctly fulfilled. Our clients with projects in the target countries expect this from us, but also the operators of the plants and users of the products.

**One thing is for sure:** planned safety of machinery and equipment, or more precisely, sustainable safety, plays an increasingly important role for your projects in Asia, because it not only gives you a unique selling point in the highly competitive market, but also ensures the safety of people and the environment.

These six golden rules are, of course, only a first approach to understanding and planning the path to conformity of your products, machines and plants to Asia. ALPHA supports you in all phases of the product life cycle, regardless of the industry you come from or whether you are dealing with individual products or complete plants.

Dr. Thomas Krause



## CANCELLED CERTIFICATES IN THE RUSSIAN REGISTER WHAT'S BEHIND IT?

Hundreds of certificates have lost their validity in the Russian register in autumn 2021. Many International export companies are affected. What happened? Was that legal? Compliance is a top priority for many companies worldwide. But not all companies see compliance in its entirety or just do not pay attention to one particular field, namely Technical Compliance when it comes to working in foreign countries or exporting to clients outside the familiar environment. This is not only about avoiding corruption or human rights violations, but also quite trivially about complying with standards and rules and not accepting questionable cheap solutions!

### 1. The issue with the "negative" decisions from Notified Bodies for certification

At first some clarification of this quite strange name of a document which states that an equipment unit is not subject to the requirements of a specific set of regulations and therefore does not have to be approved in accordance with them. In short, this document is colloquially called a "negative certificate" and the term is further used in the text as follows.

A European manufacturer of a complex plant is pleased to receive a low-cost negative certificate for a "plant for the manufacture of...", instead of a costly and admittedly time-consuming conformity assessment. The negative certificate states that the

plant in question is not subject to a conformity assessment according to the Machinery Directive, since "it is not included in the list of machinery subject to certification in the Annex to the Machinery Directive". Unfortunately, it must be clear to everyone that even if the "plant" is not listed as such in the product list, it consists of numerous components, like vessels and pressure equipment, machines, fittings, measuring devices, cables, and various electrical parts, pipelines and even complete package units, which can be assigned to various regulations and which must be approved according to the Machinery Directive, Pressure Equipment Directive, EMC, Low Voltage Directive and possibly the Ex Protection Directive. Another case shows a manufacturer of a pressure vessel, who received a

negative certificate stating that the vessel is not subject to certification according to the Pressure Equipment Directive (sometimes even such a certificate declares not being subject of the pressure vessel to the Machinery Directive).

However, it is concealed that the vessel is subject to a different conformity assessment procedure, namely declaration! Unfortunately, both sides use these subtleties to save costs for more expensive procedures. Using such loopholes is simply irresponsible on both sides – the manufacturer/supplier and the questionable certification body, which is actually "right" with the certification, but only thinks in the short term, or fulfils the customer's wishes for cheap solutions without openly addressing consequences for this.

## 2. The issue with the "slimmed down" version of the documents required for certification

In the example provided, a company finds a certification body that "does not require so many documents" and gets a necessary certificate. During delivery, customs clearance, or commissioning, inspecting bodies discover that certain documents are missing from the delivery documentation. This is the reason for detaining the goods at the border and refusing the commissioning permit – with all the consequences that follow!

What happened? Either the certification company bypassed legal requirements or produced the missing documents itself to be compliant with the procedure but did not hand them over to the client because this service - the creation of documentation - was not in the scope of the contract. A third case, which also occurs again and again: the Russian subsidiary has submitted all the necessary documents for approval, but does not pass them on to the parent company to have better chances in sales. And then the parent company owns a certificate but does not have the documents based on which the conformity assessment document was created and thus has "bad cards" when selling/exporting the product.

## 3. The issue with the recognition of protocols

A conformity assessment is carried out without the necessary audits and tests because the selected certification body supposedly trusts the existing internal protocols. However, certification bodies cannot carry out such recognition procedures and there are no general recognition agreements between international accreditation agencies and Rosstandart; instead, individual applications have to be submitted to Rosstandart and they are checked individually. Consequently, this path of certification is not legal.

## 4. The issue with conformity assessment schemes

Test protocols have been "created" before the delivery of products that will only be fully assembled on the construction site.

What to do? Always choose the best conformity assessment /certification scheme. There are enough possibilities to find the right one and also to carry out the conformity assessment at the construction site for a project-related approval, instead of on-site, in Europe, for products that are actually not mass-produced and, above all, not yet finished at the time of testing. It is also important to understand that many customers may demand redundant or wrong

certificates due to lack of knowledge or out of ignorance, therefore one must not let them push one into taking illegal or easy steps. Moreover, sustainable Project Management or Sales should not be afraid to educate customers on this issue and to look for solutions together through open and trustful communication.

## 5. Conclusion

Doing business compliantly means doing business sustainably with a focus on all three aspects – economic, social, and environmental and not looking for opportunities to avoid the responsibilities. Lots of initiatives are working on the abolition of duplicate tests in different markets, recognition of each other's protocols by accredited laboratories, and calibration certificates from accredited laboratories. One of the main targets is to create an environment that would enable accreditation services in different countries to cooperate and to look for common solutions.

And the first results are already in sight: the technical regulations on low voltage, EMC, and explosion protection are currently undergoing an amendment and are considering the recognition of international protocols based on IEC standards.

Prof Dr. Julia Krause

**ALPHA**  
THINK QUALITY

# WELDING CHALLENGES IN EUROPE, THE EAEU AND ASIA

## HAVING THE RIGHT ANSWERS TO YOUR WELDING CHALLENGES IN EUROPE, THE EAEU AND ASIA

Welding design, documentation and fabrication questions and problems affecting welding quality can come up when least expected. Welding quality can determine the success or failure of your engineering and construction projects. Therefore, having an ALPHA welding consultant available online or in person who has the right answers and solutions is essential to avoid welding mistakes, and ensure welding quality in your international projects.

ALPHA „thinks quality“, establishes and specifies welding requirements and answers technical welding questions. We advise designers, engineers, fabrication and quality personnel on matters of welding during the design, procurement, and fabrication phase needed to design and build in welding quality, by avoiding mistakes, and thereby ensuring weldments are suitable for the intended purpose.

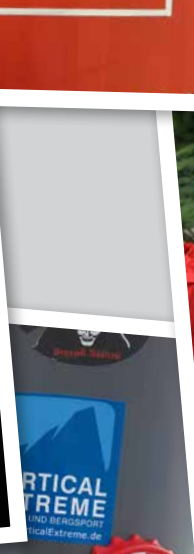
More information at: [www.alpha-consulting.eu](http://www.alpha-consulting.eu)  
or provided by contacting: [info@alpha-consulting.eu](mailto:info@alpha-consulting.eu)

## ALPHA SERVICE FOR THE WELDING OF TANKS, VESSELS AND PIPING

- Welding procedure development / preparation / evaluation / quality dossiers
- Comparative material assessment in international projects regarding usability and compliance to norms and standards of the target countries (EAEU, Asia)
- Obtain expert opinions in the destination countries / support in meeting welding standards
- Problem identifying and solutions
- Integrity services
- Preparing of quality manuals and quality programmes
- Providing qualified welders in destination countries
- Conformity assessment service, permitting and certification









INTERVIEW WITH

SHARIPBEK  
RAIMZHANOV

**Salam Sharip. I meet you now and then, unplanned, when I'm jogging through the Chemnitz parkland. What are you doing there?**

Salam, Dr. Krause! I go outside often to take a walk and enjoy the city. I like to do it especially after the rain. Recently, I have discovered a new hobby for myself – the photography. I take pictures of beautiful places or people if I find it beautiful or interesting.

**Tell me briefly about yourself. Where do you come from, where did you study, how long have you been with ALPHA?**

I was born and grew up in a small town Myrzake in the South of Kyrgyzstan. After the high school, I had a wish to go abroad for studying. Luckily, I got a place and scholarship to study Oil & Gas Engineering at the Siberian Federal University in Krasnoyarsk, Russia. I successfully finished my Bachelor's degree in 2017. After the University for some time I worked in a mining company in Kyrgyzstan. One good friend, who works at Alpha Consulting, offered me to apply for a vacant position. I read about the company at the company website and asked my friend about Alpha. I liked the company and their work. I have applied and since November 2018 I have been working at Alpha Consulting in Chemnitz.

**Exciting! How did you settle into our international ALPHA team? After all, your German was very weak at the beginning.**

I felt very comfortable in the company, and I immediately got along with my colleagues. Since our company is very international, I did not have any prob-

lems with the language. We speak different languages here: English, Russian and German. However, from the very beginning of my stay here in Germany, I began to learn German, because it is important for me to know the culture and language of the country where I live. This way you can make many new friends, learn new things and just have a good time.

**Do you understand the tough Saxon dialect? Only a few Germans outside Saxony manage to do so.**

Usually, I do not have difficulties. People try to speak "Hochdeutsch" when they see that I am still learning German. I know that even Germans from other parts of Germany find it difficult to understand some variations of the Saxon dialect. Sometimes I do not understand some expressions, but I can ask again if I do not understand something, people here are friendly and patient. Anyway, I find the dialects interesting. They are important parts of the culture.

**What are your tasks at ALPHA and what makes your work here so interesting?**

My main task is to support our clients and to make everything clear about the conformity assessment procedures in our target countries. They often have big projects, complex machines, and equipment. We work together with our clients and with our partners in the target countries to get all needed certifications, permits and other documentations related to quality and safety. Every project is unique. With each new project I meet new people,

learn new things. I like this part of my job very much.

**For many Germans, Kyrgyzstan is associated with high mountains, horses, infinity – very different from Germany. During my business trips to Bishkek, I myself admired and enjoyed the hospitality of the people. What do you miss most about your home country?**

Yes, it's true, people in Kyrgyzstan treat guests with great generosity, they are very hospitable. I often notice it myself when I come home for vacation. I miss my family and close friends back there. I used to miss national cuisine. But I learned to cook some national dishes and I cook them often with my friends here in Germany.

**What can Germany learn from Kyrgyzstan and vice versa?**

I want Kyrgyzstan to pay as much attention to science as Germany does. It would be also great if Kyrgyzstan develops the industry for manufacturing of machines and equipment. Kyrgyzstan could learn here a lot from Germany. Germany could learn something from Kyrgyzstan. For now, I do not have a reasonable answer for the second part of the question. Maybe Germany could learn to cook some Kyrgyz food. Some of them are very tasty.

**Thank you very much for the interview.**

Dr. Thomas Krause & Sharipbek Raimzhanov, B.Sc.  
Project Manager, Equipment  
Certification Department

ABOUT ME

## TATJANA SCHELINSKI

I started working for ALPHA Consulting GmbH during my studies and over the years I have grown into this "family" as well as with it. The know-how has grown, the projects have become more extensive and complex and the trust of our clients has gained on strength and became unbroken. This has been a great experience for me, and it will continue to drive me to use all my commitment in the future to move forward together with our clients more and more effectively.

Currently, my task at Alpha Consulting GmbH is to coordinate the projects of the metrology department and to implement the registration of measuring instruments in the CIS countries. The regulation of metrology in the CIS countries is very different from that in Europe and requires a lot of patience because of the time involved. Therefore, it is particularly important to inform our customers about the requirements at an early stage or to find solutions together if the time until the delivery date is already short. But together we can do everything!



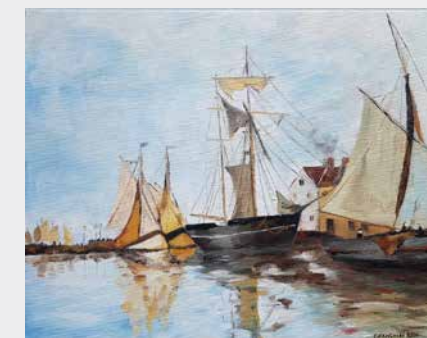
**Tatjana Schelinski, B.A.**  
Project Manager,  
Metrology Department

## MY HOBBY

*"Art washes the dust of everyday life from the soul." (P. Picasso)*



I started painting a few years ago. With art I have found a way to escape the hectic of everyday life and to find inner peace. For me, art has something contemplative. When I paint, there is only me and the colours, which are incorporated piece by piece into a greater whole. There is nothing that captivates the concentration and does not allow the mind to wander as much as the painting process.



In my free time I try out different types of colourmedia, motifs and painting styles. I find impressionism particularly interesting. It is courageous and at the same time requires technical skills and knowledge. Contemporary abstract painting, on the other hand, does not appeal to me. I believe that, like everywhere else in life, you have to master the basic

craft before you start breaking the rules you have learned.



A nice side effect of my hobby is that I can always bring a little joy to people close to me with what I create, because I give away almost all my pictures. Even those that I don't particularly like myself have always found a place on someone's wall. This is also a deeply beautiful feeling of experienced appreciation and affection.

Tatjana Schelinski, B.A.



# ALPHA

THINK QUALITY

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