



INDUSTRIES
& ENVIRONMENT

1ST QUARTER 2023

Thoughts, Information, and Innovation

A quarterly newsletter on
technical updates & news about
SGS Pakistan - May 2023

SAFER
GREENER
SMARTER

SGS



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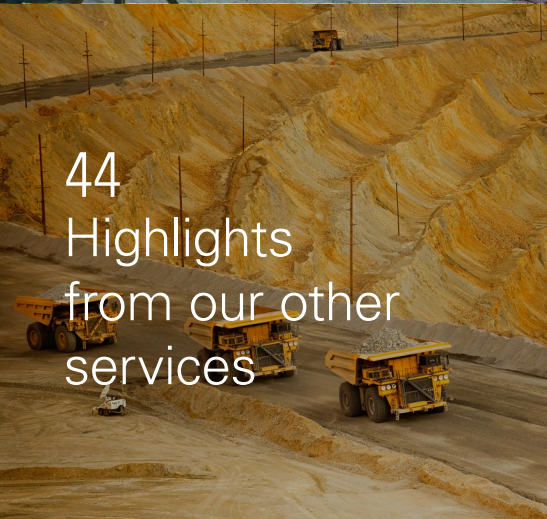
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Let us know your thoughts on this issue of the **SGS Inside Newsletter** [here](#).



Message from our Leadership



Abdul Razzak Lakhani
Managing Director - SGS
Pakistan

I hope this newsletter finds you and your family happy, healthy, and managing life to the best of your ability.

As you all are aware that SGS Pakistan was established in 1952 and was one of the first Swiss companies to be set up in a newly born country. Today, SGS Pakistan has evolved into a dynamic team of specialists in the related disciplines of quality verification, supported by state-of-the-art testing laboratories and advanced technology.

With the evolving times and various advancements, I am particularly glad to share that in SGS we have a culture to embrace innovation and to adapt new technologies to continuously bring improvement in the way we do business. Every day we deal with ample information related to global advancement and innovation and from a while I have been contemplating to give our thoughts and information a proper shape to keep our clients abreast of what's going on in SGS, primarily to stay in tune and touch with our valued clients. With this newsletter, I look forward to promoting our objective of knowledge sharing and most importantly to stay in touch with our valued clients.

Hope you have a good read!



Muhammad Aqeel
Business Manager –
Industries and Environment
Services

I hope this newsletter finds you in good health.

I am glad to share with my fellow fraternity the 1st quarterly Issue of I&E Newsletter 2023.

Like previous issue, the focus of this newsletter is to provide knowledge and information to our industrial stakeholders including students about the latest industrial trends, new developments and other technological advancements in the ambit of inspection and engineering.

In this newsletter, you will find technical papers, case studies on various topics that may be relatable and beneficial to your business. In addition, you will get to know few of the new experts who recently became part of SGS family.

With this newsletter, I look forward to promoting a culture of knowledge sharing and hope this proves to be a great way to stay in touch with you all.

Wish you and your families a prosperous year!



Mr. Tauseef H. Farooqi

Chairman – National Electric
Power Regulatory Authority
(NEPR)

Message from Chairman - National Electric Power Regulatory Authority (NEPR)

It is with great pleasure that I share my views as Chairman of the National Electric Power Regulatory Authority (NEPR) regarding the importance of technological innovation and advancement when it comes to shaping the future of the industrial sector and the entire country. It is crucial that modern technology and innovative approaches be used to address the challenges in the energy sector to help any country grow and develop economically. At NEPR, we are constantly striving to adopt new technologies, such as renewables, micro grid systems, EVs, automated meter reading (AMR), energy storage solutions, Cyber Security, and modern HSE to enhance the energy security, reliability, affordability, and sustainability of the power sector in Pakistan.

In the energy sector, emerging technologies, such as artificial intelligence have the potential to transform and create new growth opportunities. It is imperative that we keep pace with the latest developments and create a platform for technological discourse to share knowledge and foster innovative ideas. I would like to take this opportunity to commend SGS Pakistan for their contribution to the energy sector. The company has been actively involved in the testing and certification for energy projects in the country. I am also delighted to see that SGS Pakistan is taking the initiative through its newsletter to promote technological discourse and knowledge sharing. I hope that increased investment in R&D is going to help improve the energy sector's output and have a positive effect on Pakistan's economy.

In conclusion, I believe that technological innovation and advancements have the power to reshape the future of societies for the better. At NEPR, we remain committed to adopting new technologies and fostering innovation in the energy sector to meet the challenges of the future.

Message from editorial board

Dear All,

It gives us great pleasure to bring forth our 1st quarterly newsletter of the year 2023.

As the new year unfolds new opportunities and horizons for us and everyone around, we would like to take the opportunity to continue this learning journey by sharing technical knowledge from within SGS and around the globe.

This issue covers many of SGS I&E recent developments, including new capabilities, new and expanded services that may benefit your business. In addition, case studies and technical papers are also included in this issue for more holistic reading on topics of technical interest.

Our usual gratitude to Muhammad Aqeel – Business Manager of Industries & Environment Services, SGS Pakistan, for his continued conviction and support in the creation of this newsletter.

Happy reading to all our valued readers.

Editorial Board

Ms. Urooj Fatima

Ms. Iqra Akbar



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- Supply chain internationalization, risks and legislation – how experts, technology and customized audits are key

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Bringing digitization and innovation

- SGS Pakistan organised Digitization and Innovation Challenge 2023
- SmartSense: IoT based solution for Real time indoor air quality monitoring

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Events & participations

- Women's Day Celebration
- Participated in "Asset Integrity and Reliability show Middle East – Oman"
- SGS expert participated in panel discussion on "Pakistan Accord on Health and Safety In The Textile And Garment Industry" at ASSP Pakistan Chapter's 4th Professional Development Conference
- SGS Exhibited in Pakistan Mega Leather Show 2023
- Sgs Exhibited in Pakistan International Maritime Expo & Conference (PIMEC)
- SGS Exhibited in 24th Textile Asia International Trade Fair 2023
- Our female staff participated in summit "Unlocking the power of Women Entrepreneurs".

05

Webinars & workshops organised

- Complimentary session on Applicable HSE Requirements for Hotel Industry
- Session on Importance of NDT in Inspection for Students of Mehran University
- Webinar on Revolutionizing Asset Integrity Management – IMS Software
- Webinar on Structural Health Assessment

- Webinar on Inspection Schemes Development for Pipelines & Cathodic Protection Systems
- Webinar on Ex Assets Life Cycle Management
- Webinar on Connecting people, skills and technology: Any device, anywhere – SGS QiiQ
- Webinar on Fitness for Service Assessment of Safety Critical Components

06

Highlights from our other services

- Expanded portfolio of Geological Services by offering Satellite mapping, XRF surveys & subsurface data acquisition at mine site
- Find out more about our newly opened Coal testing laboratory at Tharparker, Sindh
- SGS now offers Food Contact Material testing
- Initiated Material testing & certification for Automotive industry
- Now offering Smouldering Cigarette Test

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Health and Wellbeing

- SGS Cricket Champions Trophy 2023
- Alishan Inter firms table tennis tournament 2023

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Reader's feedback



01 Announcements

■ SGS Pakistan & Cenosco Join Forces to Revolutionize Asset Integrity Management for Regional Pakistan & MENA Customers

SGS Pakistan is proud to announce its strategic partnership with Cenosco, the global leader in asset integrity management solutions with over 20 years of product leadership in asset heavy industries. The collaboration offers a unique opportunity for clients in Pakistan and the MENA region to adopt cutting-edge digital technologies and revolutionise their asset integrity management processes through end-to-end asset integrity management. Cenosco's Integrity Management System (IMS) suite of solutions currently ensures the integrity and reliability of several hundred assets in over 50 countries. Their range of solutions covers all equipment types and your asset-centric processes.

In today's fast-paced industrial landscape, managing asset integrity is paramount to ensure safe and efficient operations. However, for organizations with varied level of digital maturity, the transition to digital asset integrity management can be daunting. That is where the SGS Pakistan - Cenosco partnership comes in, bridging the gap between traditional asset management practices and the digital era.

Cenosco had its start in the industry creating unique solutions for world-renowned Oil & Gas leader, Shell. This collaboration eventually led to the commercialization of the IMS Suite for the broader Oil and Gas operators to run their operations efficiently, safely, and as sustainably as possible, whilst promoting their digital transformation journey.

With SGS Pakistan's unparalleled expertise in Asset Integrity Management, Process Safety Studies, Corrosion Management & Advance Inspection Solutions and Cenosco's state-of-the-art asset integrity management software suite, regional customers now have access to a comprehensive asset integrity management solution that empowers them to leverage digital technologies for maximum efficiency and asset availability. This strategic partnership enables organizations to seamlessly integrate digital asset integrity management into their existing workflows, regardless of their level of digital maturity.

By embracing Cenosco's advanced technology, customers can efficiently plan, schedule, and track inspection and maintenance activities, monitor asset performance, analyze data for predictive maintenance, and ensure compliance with industry regulations. The user-friendly interface of Cenosco's software makes it easy for organizations to adopt and implement digital asset integrity management, even if they lack prior experience in software-based solutions.

The strategic partnership with Cenosco helps accelerate the digitalization journey of our regional customers. Cenosco's out-of-the-box IMS solution embedded with access to exclusive libraries, extensive methodologies, and templates enables data-driven decision making for your assets. Together with Cenosco as their regional competence centre for asset integrity management, we ensure that you are set up for success from the in-depth competence of SGS Pakistan and Cenosco's leadership in asset integrity management.





■ SGS now offering Bowser Inspection as per OGRA compliance

SGS is pleased to announce that we are now offering Bowser inspections as per OGRA compliance.

Bowser / tank lorries are a key resource for fluid/fuel transfer throughout Pakistan. To ensure the safety and calibrated capacity of the bowser, it needs to be checked on various parameters. The Oil and Gas Regulator Authority (OGRA) regulates the oil and gas sector of Pakistan, and the authority is empowered to verify that bowsters meet the requirements of the specified standards as per OGRA compliance rules. In consideration to this, SGS initiates an inspection program based on technical requirements in the form of a detailed checklist, which is in accordance with OGRA compliance to ensure that bowser / tank lorries meet all technical parameters and is safe for transfer.

Our comprehensive checklist considers all aspects, including documentation, prime mover, tanker and accessories and verifies each detail through physical verification and testing as per requirement to ensure that bowser meet all safety parameters.

Benefits of Bowser Inspection

- Improved safety: A bowser inspection can help identify potential safety hazards and help prevent accidents.
- Reduced maintenance costs: Regular bowser inspections can help identify potential problems before they become costly repairs.
- Increased efficiency: Regular bowser inspections can help ensure that the equipment is running at its peak efficiency.

■ Performed NORM Survey at Vessel - Safe handling of Naturally Occurring Radioactive Materials (NORM)

What is NORM?

NORM stands for Naturally Occurring Radioactive Material. It is a term used to describe radioactive elements and their isotopes that exist naturally in the environment, such as uranium, thorium, and their decay products. NORM is present in soil, water, rocks, and minerals, and is a part of the Earth's natural background radiation. While NORM is generally not harmful at low levels, exposure to high levels of NORM can pose a health risk. Workers in certain industries, such as oil and gas, mining, and phosphate fertilizer production, are at risk of exposure to NORM because these industries can involve handling or processing materials that contain naturally occurring radioactive elements.

To minimize the risk of exposure to NORM, industries are required to follow strict safety regulations and guidelines. These may include measures such as limiting the amount of time workers spend in areas with high levels of NORM, providing protective equipment such as respirators and gloves, and monitoring the levels of radiation in the workplace.





Why you need to conduct NORM Survey?

Norm survey is conducted to determine radioactivity levels and identify specific radionuclides for a variety of reasons, including:

- Routine monitoring
- Contamination checks
- Environmental and health impact assessment

Why choose radiation analytical services from SGS?

At SGS we offer radiation testing and analysis in many different matrices, according to client's specific requirements, and we can provide detailed assessments and advice for a wide range of environmental applications. SGS has a global network to provide an extensive range of analytical services to determine radioactivity levels and specific radionuclides for a variety of sample types. Our services are NATA accredited (ISO/IEC 17025) and cover the routine testing of radioactivity in almost any sample matrix, including:

- Water (e.g. potable and environmental)
- Soil, sediments, sludge
- Mineral ores
- Solid wastes
- Vegetation (plant material, wood, etc.)
- Foods
- Airborne dust
- Air filters (HVAS, personal filters etc.)
- Wipe testing (analysis of surface contamination wipes)

We can report for a wide range of natural and anthropogenic radionuclides including:

- Gross alpha and beta
- NORM
- Uranium-238 chain radionuclides: U-238, U-234 Th-234, Th-230, Ra-226*, Pb-210
- Thorium-232 chain radionuclides: Th-232, Ra-228, Ac-228, Th-228
- Uranium-235 chain radionuclides: U-235, Ac-227, Th-227, Ra-223
- Radon (Rn-222) and thoron (Rn-220)
- K-40
- Tritium (H-3)
- Ni-63
- Cs-134 and Cs-137
- I-131
- Am-241, Co-60, Sr-90



NORM Survey at Jetty



Recently SGS Pakistan had performed a detailed NORM survey for a client at their terminal and jetty area. During survey we ensure that the work area is safe from NORM through radiation measurement of the workspace prior to startup. We suggested the personal dosage applicable for safety of personnel as per both national and international legislations.

Based on the findings, high level radiation was found at some specific location. The radiation levels were then calculated according to the hazard / frequency categorization. Based on the results and calculation, we provided following details to the client

- Identification of the HIGH-RISK AREA
- Maximum allowable working hour duration
- Identification of Specific PPEs
- Protective equipment detail

Author: Waseem Haider



■ SGS Pakistan is now approved for ZDHC version 2.1

The fashion industry is considered as one of the most chemical intensive industries around the world. An estimated 10 million tons of chemicals are used each year globally for the production of textile products. Many of these chemicals help products to achieve the desired color, effects and functionalities. However, if they are used inappropriately or ineffectively, they would be discharged from the factories into water bodies, posing global environmental concerns.

SGS Pakistan Chemical & Environmental Laboratory based in Karachi is one of the few ZDHC approved labs functioning in Pakistan. We are pleased to share that with the arrival of ZDHC Wastewater Guideline Version 2.1, SGS Pakistan has accordingly acquired its approval along with enhancement of our sampling and testing capabilities aligned with the latest requirements of new version. We also have more than fifteen ZDHC certified samplers providing sample collection consistent with the ZDHC sampling plan. SGS can perform complete chemical analysis in accordance with guidelines and authorized to upload the data on wastewater gateway on behalf of the suppliers.

The SGS Holistic Solution for managing Zero Discharge addresses the chemical and environmental issues in the supply chain. It provides technical support and feasible solutions to brands, retailers and other player in the value chain.

Our wastewater and sludge analytical services are designed based on our in-depth industry experience, knowledge, experts, common practice worldwide, as well as taking into consideration the comprehensive analytical approach and extensive ZDHC analyte list, including Conventional & Anions Parameters, Heavy Metals and MRSL Parameters.





ZDHC Wastewater & Sludge testing capability

ZDHC WASTEWATER TEST PARAMETERS

ZDHC TABLE REF.	PARAMETERS
1 A	Alkylphenol (AP) & Alkylphenol Ethoxylate (APEOs), including all isomers
1 B	Anti-Microbials & Biocides
1 C	Chlorinated Parafin
1 D	Chlorobenzenes and Chlorotoluenes
1 E	Chlorophenols
1 F	Dimethyl Formamide (DMFa)
1 G	Dyes – Carcinogenic or Equivalent Concern
1 H	Dyes – Disperse (Allergenic)
1 I	Dyes – Navy Blue Colourant
1 J	Flame Retardants
1 K	Glycols / Glycol Ethers
1 L	Halogenated Solvents
1 M	Organotin Compounds
1 N	Other/Miscellaneous Chemicals
1 O	Perfluorinated and Polyfluorinated Chemicals (PFCs)
1 P	Phthalates – including all other esters of ortho-phthalic acid
1 Q	Polycyclic Aromatic Hydrocarbons (PAHs)
1 R	Restricted Aromatic Amines (Cleavable from Azo-colourants)
1 S	UV Absorbers
1 T	Volatile Organic Compounds (VOC)
2	Wastewater Heavy Metals Parameters
3	Conventional and Anion Parameters
4 A-D	Sludge Conventional, Heavy Metals & MRSL Parameters

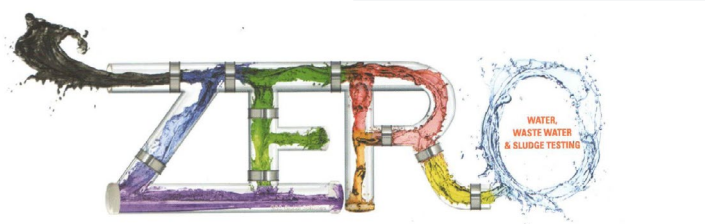
Benefits



Our Zero Discharge solution offers a holistic approach, which:

- Strengthens clients understanding of the ZDHC challenge
- Helps brands and retailers to update their results on ZDHC gateway
- Offers analysis, site visits and other technical consultancy services, all conducted methodically and scientifically, with results presented in an accurate and factual manner
- Supports research development and delivery of innovative solutions
- Enables clients to understand their results of wastewater & sludge by benchmarking and establishing baselines, facilitating the identification of areas for improvement, recognize and acknowledge improvements and achievement of goals

Author: Ramsha Kulsoom



■ SGS Dangerous Goods & Cargo Compliance services for the logistics and e-commerce segment

SGS Pakistan is offering its expert services, to the supply chain by ensuring safety and compliant handling in transportation of goods which needs special care or attention. With SGS's full-service option, you can benefit from our expertise from end to end. Which includes:

Sample Management

Fast, safe and compliant preparation and global delivery of commercial samples. Services aim at supporting our client's sales activities and include collection, storage, decanting/filling, packing, labeling, documentation and shipping.

Dangerous Goods & Cargo Compliance

Services focused on safe and compliant handling and transportation of Dangerous Goods. Services include packing, labeling, documentation, shipping, manpower services, training & consultancy, supply of goods





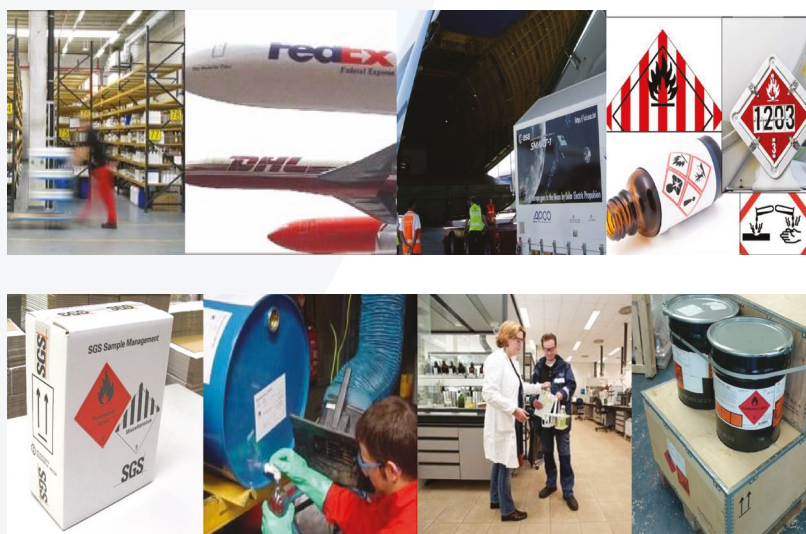
Logistics Control

Arranging global transports and return shipments for goods that need special care or attention

Benefits:

- **Business continuity (avoiding delays):** In order to move any sample shipment related to dangerous goods worldwide. SGS Pakistan offers its one stop global platform to minimize the risk and delays of the sample shipment depending on the nature of the shipment.
- **Ensuring local and global compliance:** We ensure all safety protocols and the need of our client required samples, which are shipped by air, following the regulation of international air transport association (IATA). We take full responsibility, as Shipper on behalf of our clients by ensuring the sample shipment is properly collected, marked, labelled, documented, packed, and handed over to the nominated carrier. Any information of our reputed client is kept confidential within SGS which cannot be breached to any of the client competitors.
- **Avoiding fines and penalties due to non-compliant cargo:** To avoid storage and demurrages at any destination or return of the sample shipment to its origin, we strictly take all security measure by ensuring consignee having a valid import permit for import of the consignment, while SGS Pakistan to ensure all necessary documents are fully complied for export of the sample shipment to the clients desired destination and to avoid any delays in clearance of the shipment which may cause penalties at destination.
- **Decrease risk of accidents and ensure health and safety of staff:** When preparing dangerous good samples for any classification. SGS Pakistan, beforehand ensure to follow all safety protocols as per SGS HSE / sample management policies from preparation of the samples to its final packaging.
- **Brand protection:** SGS being a brand itself, takes full responsibility by ensuring the client needs and their requirements which also ensures the client brand is protected and it's in safe custody during transportation.
- **Flexible engagement models (on-call, secondment, and remote supervision):** 24/7 round the clock, we are always striving to facilitate our client requirements. The team of sample management services believes in cost effective services and smart work.

Author: Muhammad Javed





■ 04 more SGS inspectors certified on API 570 & 571 standard for Corrosion and Materials Certificate.

We are excited to announce that four of our I&E inspectors have recently obtained API 570 and 571 certifications. We congratulate them on their dedication to continuous learning and professional development.

The newly certified inspectors are Mr. Burhan Raees and Mr. Muzaffar Ali Abro, both of whom are now certified as API 571 inspectors. In addition, Mr. Sheikh Muhammad Sohaib and Mr. Tarique Ali Memon have both earned certification as API 570 inspectors.

These codes are the recommended practice that discusses damage mechanisms applicable in oil refineries. API 571 is a reference document that contribute to the overall management of pressure equipment integrity and is a useful resource for many mechanical integrity program activities including:

- Identification of existing damage or deterioration and anticipated rates of degradation,
- Identification of future damage mechanism susceptibilities,
- Development and maintenance of inspection and monitoring strategies, programs, and plans (e.g. per API 510, API 570, and API 653),
- Implementation and monitoring of integrity operating windows (IOWs) (see API 584),
- Development of corrosion control documents (CCDs) (see API 970),
- Implementation of Risk-Based Inspection (RBI) programs (see API 580 and API 581),
- Conducting Fitness-For-Service (FFS) assessments (see API 579-1/ASME FFS-1),
- Application of proper examination techniques, and
- Conducting pressure equipment integrity incident investigations (see API 585).

We are proud to have such highly skilled and qualified individuals on our team, and we are confident that their expertise will continue to benefit our clients and projects. Congratulations once again to our certified inspectors!



Inspectors certified for API 570 and API 571 - SGS Pakistan



Burhan Raees



Muzaffar Ali Abro

Certified as API 571 inspectors

Certified as API 570 inspectors



Tarique Ali Memon



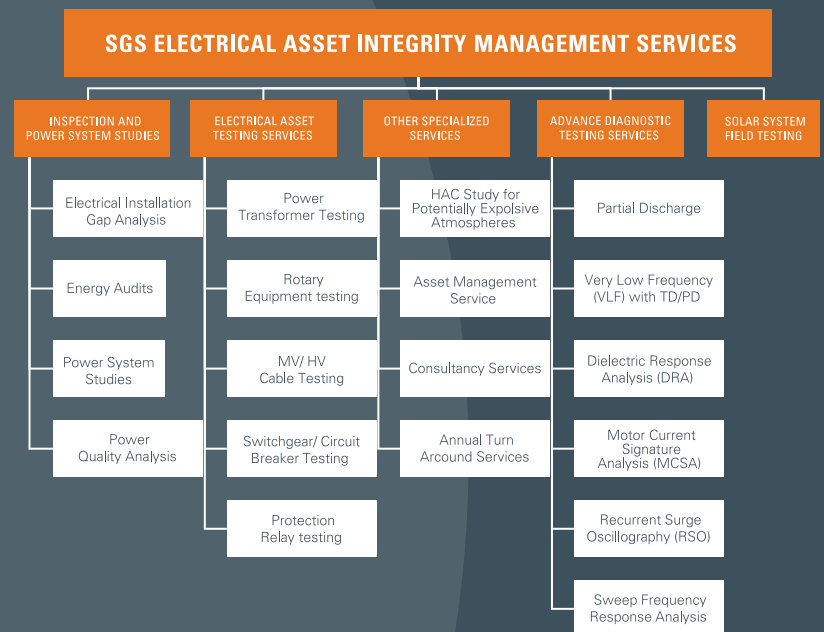
Sheikh Muhammad Sohaib



02 Technical corner

SGS Electrical Asset Integrity Management Services

As a best-in-class solution provider SGS' Power and Utilities network is dedicated to support our clients throughout the design, development, manufacturing, construction, and operational phases of their assets' lifecycle, by delivering quality value-added solutions, when and where required.



Services for Independent Engineer (IE)

SGS Pakistan offers a non-biased assessment on the technical, contractual, and financial aspects of large capital energy projects. Our independent engineering staff is technically trained and proficient in all engineering disciplines, including a balanced mix of professional engineers and Business professionals. SGS offers:

- Technical Due Diligence
- Design Review
- Feasibility Assessment
- Operation and Maintenance Reviews
- Performance Test Monitoring
- Project Operations Monitoring

■ Heat Rate Test- Performance Test for Power Plants



We have diversified experience for performing and witnessing of heat rate test across several power plants in Pakistan. SGS offers periodic Heat Rate Assessment for continuous performance measurement & improvement coupled with advance diagnostic NDT techniques.

SGS Pakistan can support in the following areas:

- Pakistan can support in the following areas:
- Development of Heat Rate Procedures
- Review of Design Documents as per actual Correction Curves
- Calibration of Energy Meters, Instruments i.e. Flow meters, Transmitters etc.
- Fuel Sampling and Analysis through our accredited labs
- Execution of Heat Rate Test / Witnessing of HRT activity as independent engineer
- Analysis of collected data
- Reporting

■ Advance Diagnostic Testing of Electrical Assets

SGS Pakistan offers professional expertise in testing, commissioning & maintenance of electrical power systems at various voltage levels. With key experience in advance diagnostic testing and commissioning of switchgears, power and distribution transformers, protection and control systems, substation auxiliary equipment, and generation equipment; SGS Pakistan is committed to provide benchmark services and solutions to all industrial business units.

We also provide Condition Monitoring & Diagnostic Services of Rotary equipment such as vibration analysis and monitoring, Laser Alignment, and Oil Analysis through our competent and certified professionals with diversified experience. We also have a dedicated team of certified Energy Auditors and Professionals, who have diversified experience and mandatory certifications, to provide quality services to our valued clients.

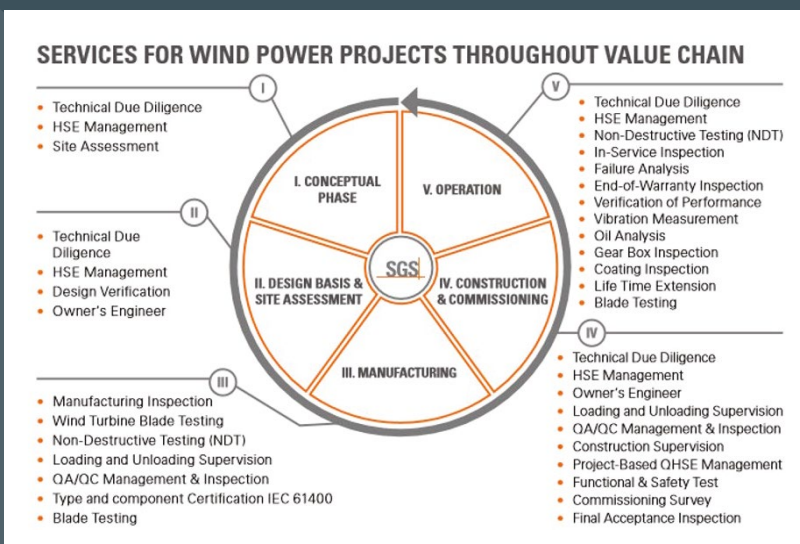
■ Explosive Atmospheres

Electrical equipment installed in Potentially Explosive Areas increase the risk of accident if not properly selected, operated, or maintained. Area classification is a method of analyzing and classifying the environment where explosive gas atmosphere may occur to facilitate the proper selection, installation, operation of equipment to mitigate the risk of fire / explosion. Hazardous Area Classification is carried out as an integral part of risk assessment to identify places where control over ignition sources is required. SGS team of IECEx certified personnel provide consultancy services for operation and maintenance of classified electrical equipment to ensure safe and reliable operations throughout the asset lifecycle.





Wind Power Plants



Solar Power Projects – Life Cycle Services



Advanced Inspection Solution for Carbon Steel Tube's Heat Exchangers

Introduction

Exchangers, boilers and fin fan coolers having carbon steel tubes, creates a challenge for inspection due to nature of material properties and excessive corrosion present on tubes surface, which affect inspection results, therefore an appropriate inspection package needs to be developed which can overcome these problems.

Considering these challenges, the most appropriate solutions for carbon steel tube inspection are Remote filed testing (RFT) and IRIS. These techniques not only give desired results but with the added advantage of keeping the project cost at the lower end. Let's look at these techniques in detail.

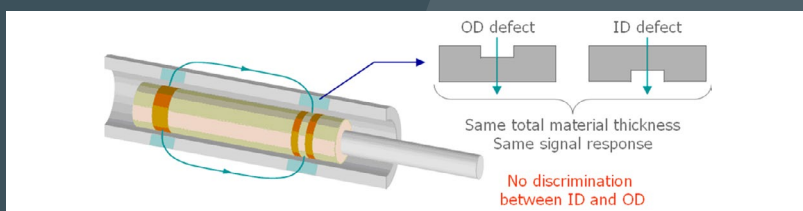
Inspection Strategy



In this inspection strategy, which was created especially for carbon steel tubes, all tubes are first scanned using the Remote Field Testing (RFT) technique, which serves as a screening method. Defective tubes are then highlighted during this screening. After an initial screening of all tubes with RFT an execution of a second scan will be carried out only on those tubes that would be highlighted in RFT inspection, this gives us the added benefit of accurate defect sizing and geometry information while also addressing the RFT's limitation of being unable to differentiate between ID and OD defects.

Remote Field Testing (RFT) Working Principle

The RFT is a through-wall transmission technique where the magnetic field travel through the tube wall twice, once at the exciter location and once at the receiver location. Any defect located at the exciter and/or receiver location will have an impact on the magnetic field read by the coils. The measurement corresponds to the total material thickness that the magnetic field has gone through.



Pic showing RFT Working Principle

For this reason, the RFT technique cannot differentiate between ID or OD, the coils only measure the total thickness of material.

In other words, they are placed at a distance where they are unaffected by the magnetic field from the exciter coil but can still adequately measure the field strength from the secondary magnetic field. By monitoring the consistency of the voltage induced in the pick-up coils one can monitor changes in the test specimen. The strength of the magnetic field at this distance from the excitation coil is weak but it is sensitive to changes in the pipe wall from the I.D. to the O.D.

IRIS Working Principle

IRIS works on the pulse-echo principle similar to most of ultrasonic testing techniques. IRIS probe consists of a Turbine (a rotating device) and a cable having wires to carry signals and water) is inserted into the tube to be inspected. The tube is then filled with water by flooding. The ultrasonic pulses are generated by the transducer within the probe and transmitted along a path parallel to the tube axis. These pulses are then redirected radically to the tube wall with the help of 45° rotating mirror. The mirror is rotating with the help of pressurized water passing through the probe cable.

This mirror distributes the ultrasonic beam around the tube circumference. The Ultrasonic beam is reflected from Tube ID and OD, the time between these two signals represents Tube thickness. The same process is repeated (in reverse order) to receive the return signal. These signals are shown on the equipment screen as B, D & C scans after processing by equipment.

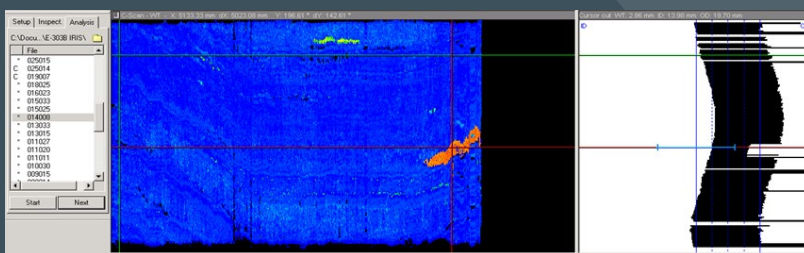
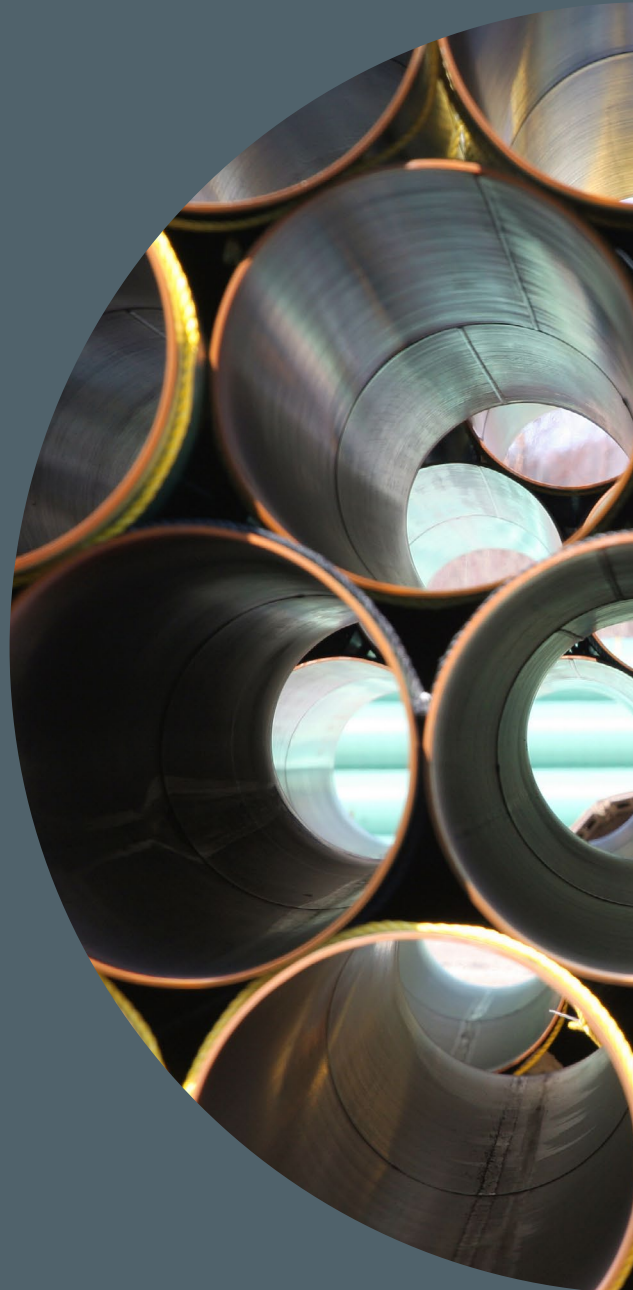


Fig showing IRIS Data scan having a severe corrosion Indication





Conclusion

The SGS inspection methodology for carbon steel tube inspection not only successfully addresses the inspection-related difficulties, but also offers the additional benefit of keeping the project's overall cost at a manageable level

Author: Zahir Khan



■ Journey to sustainable manufacturing through energy optimization; A special case for Textile sector

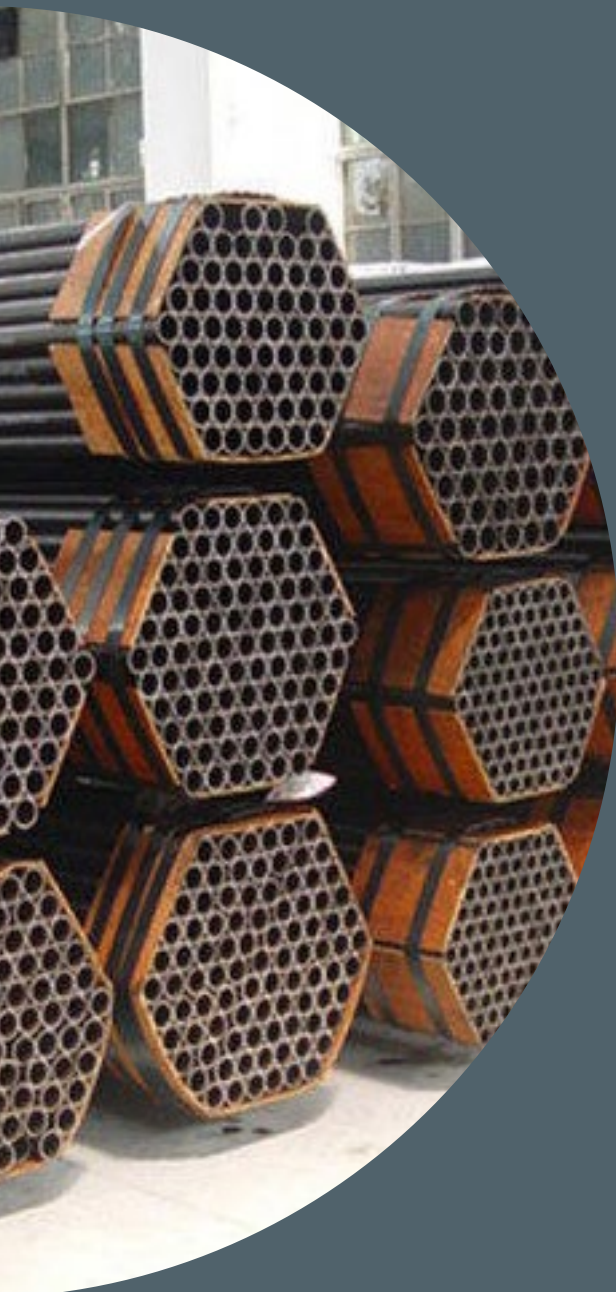
In today's world, sustainability is no longer a priority, but rather a necessity.

Energy costs are one of the largest controllable costs in most organizations and there is considerable scope for reducing energy consumption and hence the related costs. Most savings can be made for little or no cost, while further savings can be made as a result of investment which gives a good rate of return. Investment in the energy efficiency can therefore lead to improve profitability. A good energy management policy not only can save your operating costs but can also give contribution to the 'greener environment by bringing reduced adverse impact on the environment.

With our dedicated taskforce, our longstanding expertise can evaluate the most suitable energy saving options for your company, thereby reducing operation costs of long-term operations. SGS Energy Efficiency program are based on this concept.

Energy Efficiency program include:

- Energy audit and evaluation of energy consumption
- Energy savings Measurement & Verification (M&V)
- Energy management system services
- Operational tests on major energy consuming equipment, energy project supervision
- Energy management training





The phases for conducting an energy audit are summarized in the following points:

- Fieldwork on site by skilled personnel to collect (inventory and use regime and measurement facilities) necessary information.
- Energy analysis by using tools that simulate the building and its facilities in order to obtain the estimated consumption of various facilities.
- Analysis of improvements aimed at saving and energy efficiency taking as starting the current situation.

To address the sustainability imperative, one of the leading textile client partnered with SGS Pakistan to design and implement the Energy Management Program.

Under this ambitious Energy Management Program, comprehensive energy audits were being carried out at all textile units to explore opportunities and strategic implementation of these projects to reduce energy & water consumption and Carbon emissions. Several initiatives launched in the domains of energy conservation, energy efficiency, digitalization, energy analytics, and system and process optimization since the beginning of 2022.

Among the completed and ongoing projects are:

- Steam system upgradation and optimization
- Waste heat recovery from Gensets
- Switching/ cofiring fuels on steam boilers and thermal oil heaters
- Arresting compressed air, steam, and natural gas leakages
- Insulating the steam, condensate, and hot thermal oil lines
- Compressed air system optimization
- Process heating system optimization
- Absorption Chiller

After review and analysis, we provide the following solutions with practical and economical approach:

- Significant energy saving methods
- Management & operating characteristic of your organization
- The annual energy consumption breakdown for each energy consumption unit
- The initial investment and payback period for each energy-saving option.

Benefit to Client

- Reduction in energy expenditure by more than 150 million PKR in 2022 as a result of these initiatives
- There were significant reduction in Carbon emissions.
- Few of the projects have recently been completed to realize additional cost savings of about 100 million PKR per annum.

With SGS expertise, several other such initiatives are in the planning or execution stage of client for sustainable business competitiveness.

On one end, there is a race to digital technologies in order to bring more efficiency to the manufacturing process and reduce production costs. On the other end, companies are facing pressure to reduce their energy spending and become more sustainable. In view of that, client has deployed a data-driven energy analytics platform at the processing unit to tackle these new challenges and transform them into business opportunities.

SGS & its technological partner will enable client to optimize sustainability, energy efficiency, and productivity. This AI-based solution, combined with its unique expertise, brings concrete results such as:

- controlled energy consumption
- constant reduction of Carbon footprint
- new energy efficiency and optimization practices.





Conclusion

Energy Management Program is assisting in making informed investment decisions, capturing financial returns, improving productivity, and reducing environmental impact.

Author: Hasham Khalid



Mechanical Integrity Assessment of Boilers – Ensure Quality & Reliability

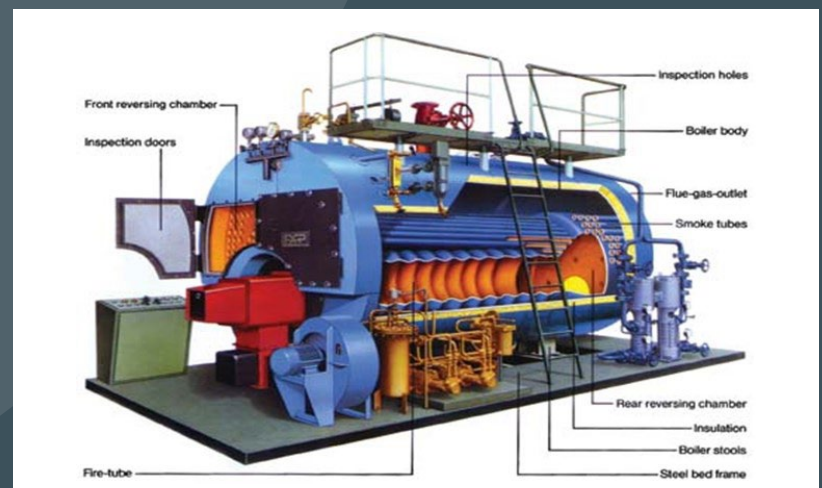
Introduction:

Boiler is a closed vessel where combustion of fuel produces heat to convert water into steam at the desired pressure and temperature. There are many different types of boilers, the major difference is to convey the heat or to generate the steam. Here are some of the most common types of boilers, that we will also discuss in detail:

- Fire Tube Boiler
- Water Tube Boiler
- Heat Recovery Steam Generator (HRSG)

Fire Tube Boiler:

In a Fire Tube Boiler, the fire and the hot gases are inside the tubes, Fire Tubes Boilers are generally of small size (under 100,000 lb/hr & more commonly under 50,000 lb/hr steam capacity) and relatively low pressure (under 250 PSIG and more commonly under 150 PSIG) (Less than 18kg/cm²). Fire Tube Boilers are usually Packaged Boilers and are skid mounted.



Water Tube Boiler:

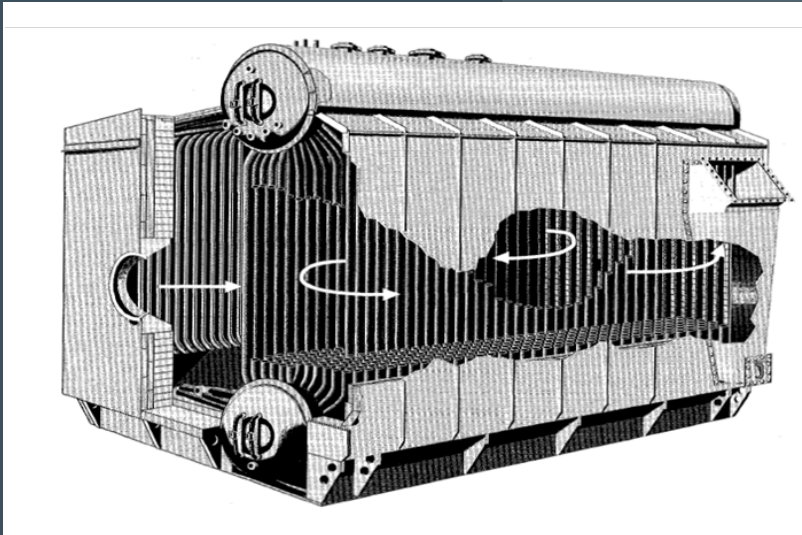


Water Tube Boilers are commonly straight tube boilers or bent tube boilers, Straight tube boilers are connected into headers, which in turn are connected to the boiler drums.

Water tube boilers are always used when large steam capacities are needed, They are also used for high pressures and temperatures.

They have been built in sizes up to 5,000,000 lb (2,268,000 kg) of steam per hour at pressures up to 5000 psi gauge (34,474 kPa) and temperatures of up to approximately 1200 °F (649 °C).

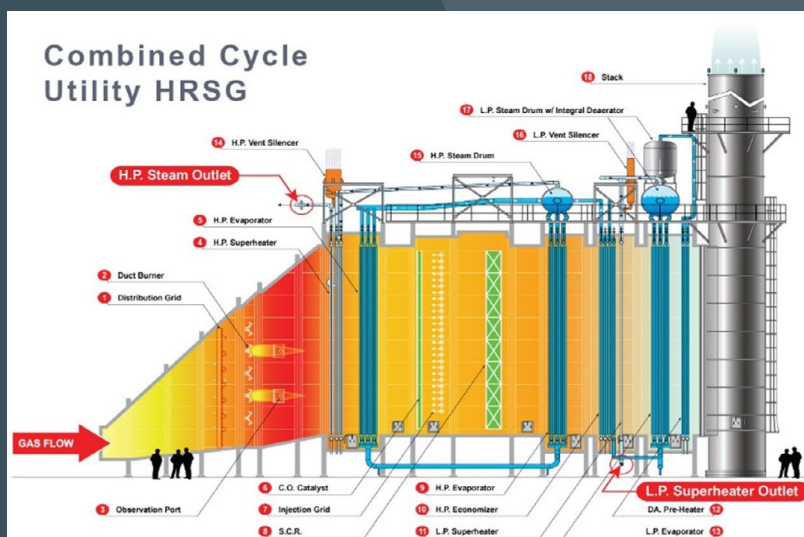
Water Tube Boilers operates at 18kg/cm² to 100-kg/cm² whereas Super Critical Boiler operates up to 225kg/cm².



Heat Recovery Steam Generator (HRSG):

Waste or surplus heat can come from furnace flue gases, Gas turbine flue gases, Process coolers etc. An Example of HRSG is that associated with GT, The Gas Turbine Waste Heat Boilers are usually of special design. Gas Turbine Boiler size is dependent on the size of Gas Turbine. They typically produce 100,000 to 400,000 lb/hr of steam at 150 to 600 PSIG.

These heat recovery steam generators (HRSGs), which are used to convert steam back into electricity from steam turbine back-burning gas, are also called HRSG (Heat Recovery Steam Generator) in the Combined Cycle Power Plant (CCPP).





Boiler Inspection, Codes and Standards and Relative Damage Mechanisms:

As we have discussed above, Boilers operate under extreme pressure and extreme fluctuations in temperature, without periodic inspections a flaw in a boiler could go undetected. Over time, that small, undetected problem will worsen, and could, in the worst case, lead to a catastrophic failure that could cause an explosion, injuring or even killing those working nearby.

Boiler inspections help prevent catastrophic failures by uncovering and tracking flaws so that proper OEM manuals and maintenance procedures can be followed. Here we also discuss about international codes and standards and before preparation of Inspection strategies and planning we must know about relative damage mechanisms and prevention methods.

Code & Standards:

Apart from the below international codes and standards, local regulatory requirements and guidelines must be followed by owner/user, Boiler operators.

- NBIC: National Board Inspection Code (NBIC-Part-2 for Inspection)
- API-510: Pressure Vessel Inspection Code –In service inspection, Rating, Repair & Alteration
- API -RP 571: Damage Mechanisms Affecting Fixed Equipment in the Refining Industry
- API RP 572: Recommended Practice for Inspection of Pressure Vessel
- API RP 573: Inspection of Fired Boilers and Heaters
- ASME Section-I: Rules for construction of Power Boiler
- ASME Section-VIII Div 1: Rules for Construction Boiler & Pressure Vessels
- ASME Section-VII: Recommended Rules for the Care of Power Boilers
- ASME Sec V: Non-destructive Examination
- ASME Sec IX: Welding Qualifications
- ASME PCC-2: Repair of Pressure Equipment & Piping

Damage Mechanisms:

Boilers may fail due to many causes, there should be operational handling issues, instrumentation or Auxiliaries failures, age factor or Igniter or Pilot Light Failure, here we will discuss about mechanical damage mechanisms which also cause of Boiler failures, below are the most common damage mechanisms:

- General Surface Corrosion
- Pitting
- Flow Accelerated Corrosion and Fluid Erosion
- Under deposit Attack
- Fatigue and Corrosion Fatigue
- Creep and Creep Fatigue
- Fire or Gas Side Erosion or Attack
- Other Mechanisms (Hydrogen Embrittlement, Stress-Corrosion Cracking etc.)

Inspection activities:

A proper inspection of a pressure-retaining item requires many pre-inspection planning activities including:

- safety considerations, an inspection plan that considers the potential damage mechanisms, selection of appropriate inspection methods, and awareness of the jurisdictional requirements.
- This Section describes pre-inspection and post -inspection activities applicable to all pressure-retaining items.



Specific inspection requirements for pressure-retaining items are identified in:

- NBIC Part 2, 2.2 for Boilers,
- NBIC Part 2 2.3 for Pressure vessels,
- NBIC Part 2 2.4 for Piping and piping systems,
- NBIC Part 2 2.5 for Pressure relief devices

Author: Mashooque Ali



■ How fuel quality monitoring program helps control the quality of fuel distributed through retail stations more efficiently?

SGS Pakistan is pleased to share that we are offering Fuel Quality Monitoring Programs. Petroleum industry is one of the most important industry in Pakistan's economy. We understand fuel stations are not just about selling fuel, customers are looking for a wide range of quality products and services. Failure to ensure fuel quality can have wide-ranging consequences, from impaired engine performance and reduced engine life to costly increases in fuel consumption and a damaging impact on the environment. Our fuel quality monitoring program helps you control the quality of fuel distributed through retail stations more efficiently.

Why choose fuel quality monitoring programs from SGS?

Our fuel quality monitoring program provides:

- An audit focused on processes that influence fuel quality
- Sampling at every point of fuel distribution – including retail stations, transporters/tank trucks and reserve stores/depots
- Random spot checks, sampling and storage of samples to identify discrepancies in quality along the supply chain
- Detailed analysis of fuels to meet the established Seal of Quality requirements
- Our fuel quality program can be applied to fuel retail stations, terminal/depots and transportation by carrying out checks of tanker trucks and this fuel quality programs can be implemented either separately or together.

Our fuel quality monitoring program helps fuel retailers:

- An audit focused on processes that influence fuel quality
- Sampling at every point of fuel distribution – including retail stations, transporters/tank trucks and reserve stores/depots
- Random spot checks, sampling and storage of samples to identify discrepancies in quality along the supply chain
- Detailed analysis of fuels to meet the established Seal of Quality requirements
- Our fuel quality program can be applied to fuel retail stations, terminal/depots and transportation by carrying out checks of tanker trucks and this fuel quality programs can be implemented either separately or together.

Our fuel quality monitoring program helps fuel retailers:

- Gain independent fuel quality control over the whole distribution chain
- Access independent technical support for quality issues
- Enhance consumer confidence in fuel quality
- Enhance brand reputation and gain a competitive edge by distinguishing themselves from others in the market





Our fuel quality monitoring program helps consumers:

- Identify a simplified selection of fuel retail stations that sell quality fuels
- Prevent car damage and related costs
- Access independent support for issues through professional and objective findings

■ Supply chain internationalization, risks and legislation – how experts, technology and customized audits are key

ENTERING THE DIGITAL AGE

Complexity and complications through internationalization and suppliers

Sourcing from various parts of the world is increasing. As supply chains become more internationalized, they naturally become more complex, making them increasingly prone to disruptions caused by a lack of supplier visibility.

Responsible supply chains and sourcing are business priorities. Achieving transparency throughout your supply chain is essential.

A richness of risks

From the types of products and services to safety, social and ethical issues, there is a rich tapestry of supply chain risks. Here are a few:

- Country and/or region of supply – when sourcing from low-cost or high-risk countries
- Types of products and/or services – such as safety-critical items or those prone to theft due to high value on the black market
- Spending levels – how much money the company spends on particular products and/or services
- Safety – when suppliers import risks to the organization
- Reputation – when supplier behavior directly affects the organization's reputation
- Quality – when high standards are required
- Social and ethical – when there is an increased risk of factors like bribery, corruption, modern slavery and child labor, etc.

Avoid losing time and money

You might be aware of weak points in your supply chain while other issues remain undetected. If you fail to address these, you could lose money or time, or both, and face reputational damage and shareholder and stakeholder distrust.

One of the most powerful ways to protect your organization and add value to products and services is through professional, independent auditing. Assessments help to verify risks identified during the risk assessment process and engage collaboratively with the supplier on remediation plans.

ENTERING THE DIGITAL AGE

Defining a digital supply chain

Digital technologies, such as blockchain and virtual reality (VR), can be harnessed to totally redefine how the work of supply chains is conducted.





Digitizing your supply chain involves applying electronic technologies to every aspect of your supply chain. Electronic connectivity is at the heart of a digital supply chain. This is enabled by numerous enabling and disruptive technologies like:

- The Internet of Things (IoT)
- End-to-end digital connectivity
- Cloud computing
- Blockchain
- Big data
- Artificial intelligence (AI)
- Predictive analytics
- Machine learning
- Cybersecurity
- Software as a Service (SaaS)

Why a digital supply chain?

A digital supply chain can eliminate the use of paper, manual data entry and updates, and the need to request information, such as by phone call, because you already have it at your fingertips. Using electronic sensors and supply chain visibility software with advanced tracking capabilities can allow you to track the movement of goods throughout your supply chain in real time. End-to-end electronic connectivity enables performance management and optimization, whatever the level of complexity. This means that a digital supply chain can be fully integrated from the customer to all supplier levels, inclusive of every function, with transparency and visibility.

How we can help

Whatever your business or supply chain complexity, we can support you to implement a digital supply chain. Our supply chain and technical experts can help you to optimize costs, increase operational efficiency and access transparent statistics. Aspects like process management, material flow, supply and demand planning, resource planning, inventory levels and strategy can be managed dynamically with real-time, global and holistic information at your fingertips.

WHY IS SUPPLY CHAIN MAPPING IMPORTANT?

Defining supply chain mapping

Supply chain mapping is the method of documenting information across companies, suppliers and individuals involved in your supply chain, to map your supply network. This map can help to identify opportunities and mitigate risks throughout your supply chain.

Why is mapping important?

Mapping allows you to implement strategies to swiftly react to supply chain issues, such as supply shortages, a lost order, a surge in demand or something unexpected. Your organization can also develop a better understanding of surrounding costs, timeframes and risks, which provides an advantage over competitors that lack this information.





What are the benefits?

Mapping can help you to:

- Strengthen your entire supply chain
- identify where value is added or lost
- Mitigate the impact of risks before they happen
- Streamline and speed up processes
- Discover the elements that most impact cashflow

How we can help

Our technology partner, Transparency-One, and global managed service enable you to discover, analyze and monitor all suppliers, components and facilities across your entire supply chain. It uses real-time data to reduce risks, identify component origins and ensure compliance.

Using cutting-edge, cloud-based technology and our global experience in product testing and certification, Transparency-One allows you to:

- Check supplier certification and identify vulnerabilities
- Proactively reduce risks to your brand
- Enable quick and efficient responses to potential crises
- Provide customers with up-to-date information
- Gain consumer loyalty and trust

THREE STEPS TO A RESPONSIBLE SOURCING PROGRAM

Define, determine, develop

More organizations are embracing the demand for responsible sourcing and watertight supply chains. This is seen in the growing popularity of CSR, ESG and sustainability in investment decisions, and consumer demand for ethical and sustainable goods.

Supported by Transparency-One, you can follow three steps to develop and implement a successful responsible sourcing program.

1. DEFINE THE STARTING POINT

Responsible sourcing is an ambitious goal. You can prioritize where to begin, given your organization's resources, capabilities and priorities.

2. DETERMINE WHAT DATA TO COLLECT

The amount of available supply chain data is virtually limitless. Knowing what data, and from which suppliers, will help you to meet your specific needs.

3. DEVELOP A SUPPLIER ENGAGEMENT PLAN

Stakeholder participation at all supply chain levels is crucial. Discover the best way to communicate and engage with suppliers to maximize participation.

While responsible sourcing programs vary according to industry and specific business priorities, the steps provide a road map to help companies establish a solid foundation and maximize the likelihood of success.



Combining innovative technology with subject matter experts



Our best-in-class technology and subject matter experts can help you to improve supplier data accuracy through:

- Risk assessment
- Self-assessment questionnaires
- Data validation
- On-site audits based on a supplier's products, services and / or region of supply

Our software solution combines with our supplier onboarding infrastructure and global network's data validation capabilities to support your supply chain evaluation and mitigation.

CONCLUSION

Getting past the issues, together

Whether you have supply chain complexity, supplier or legislation issues, or a combination of these, or something else, our ever-evolving Supply Chain Assurance portfolio, powered by the latest technology and knowledge, is there for you.

With expertise in all major industries, we can help you to map your supply chain, helping to ensure that you have safe, effective and efficient processes, adhering to even the newest legislation.

Detail technical paper is available on below link : [SGS KN Supply chain internationalization risks and legislation EN.pdf](#)





03 Digitization

■ SGS Pakistan organized Digitization and Innovation Challenge 2023

Innovation Month – Digitalization & Innovation Challenge 2023

Digitalization and innovation are key drivers of growth and competitiveness in today's business landscape. SGS Pakistan is continuously striving to successfully leverage these concepts to improve efficiency, reduce costs, and deliver best services to our customers.

Following the success of the SGS Pakistan in global SGS Moonshot challenge, SGS Pakistan have launched February as innovation month and rolled out D&I Challenge to explore ideas. The theme of the competition was mainly to identify a huge problem, followed by proposing a radical solution using breakthrough technology.

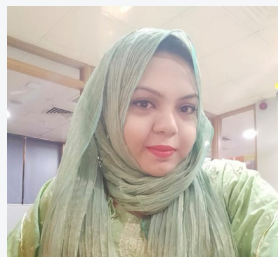
Appreciation & prize distribution by SGS Global Management

SGS Global Management Team Mr. Hakan Sebukcebe (Managing Director - Middle East) and Mr. Louis Grouiller (Financial Controller – EEME) visited SGS Pakistan and honored the D&I prize distribution ceremony with their presence.

Total of 96 ideas were generated from various services, which were scrutinized by Mr. Anatoliy Mityayev (Regional IT Manager and D&I Head - EEME). The results were announced in a brief ceremony where the top two winners were given prizes by Global Management Team Mr. Hakan, Mr. Louis & SGS M.D Mr. Abdul Razzaq Lakhani. The team also appreciated SGS Pakistan's for successfully bringing innovative & quality services to clients.

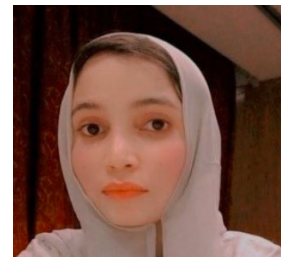
Muhammad Aqeel - Business Manager I&E, thanked Global Team for their appreciation and presented traditional Ajrak & Topi as a gesture of thanks.

Brief highlights of our winners and their ideas.



1st Winner
- Sumaira Khan (I&E)

Idea: E-Examination Centre for Customers.



2nd Winner
- Ushna Khan (I&E)

Idea: Training via Augmented Reality & Virtual reality

Congratulations to Sumaira Khan & Ushna Khan for winning SGS Pakistan D&I Challenge and appreciation for remaining participants for their incredible engagement and active participation in submission of ideas.

Author: Sunia Shiraz

"Digitalization & Innovation Challenge
2023 Celebration Highlights"





■ SmartSense: IoT based solution for Real time indoor air quality monitoring



Real time indoor air quality monitoring with our Internet of Things (IOT) solution.

SGS SmartSense brings the Internet of Things (IOT) to the industrial hygiene industry with cloud-based monitoring and sampling initiation. Direct read capabilities include Total Particulate, PID, CO, CO₂, SO₂, O₃, EtO, CH₄ and more. Paired with direct read sensors, active sampling capabilities include silica, VOCs, metals, and more.

SGS Smart Sense offers you:

- Continuous monitoring with readings every minute
- Interchangeable parameter configuration – unlimited selection of air quality parameters in addition to temperature, humidity and pressure
- The ability to integrate SGS SmartSense data into third-party applications with an API data feed
- Capture validation samples for accredited lab analysis with the SGS SmartSampler, an integrated sample initiation system

Why choose SmartSense from SGS?

SmartSense enables you to:

- Collect exposure data 24/7 for Indoor Air Quality (IAQ), wildfires, perimeter and task monitoring, and other monitoring situations
- Access, analyze, download sensor data anytime, anywhere in the world via any connected device
- View device locations on a map and see the latest real-time data feeds via SmartSense LiveView
- Customize sensor alarm thresholds for notification via text and email
- Take autonomous grab samples when paired with the SGS SmartSampler

Why SGS smartsense?

Around the world, people are deploying SGS SmartSense for:

- Investigating known or suspected air quality issues, in both indoor and ambient environments, including:
 - Vapour intrusion studies
 - Fenceline monitoring studies
- Supplementing traditional and regulatory defined monitoring methods with continuous monitoring data of site conditions
- Remotely and automatically capturing physical samples for lab analysis based on continuous data trends, when combined with the SGS SmartSampler
- Providing a hyper-local network of monitoring points across an urban area for real-time assessments of air quality within Smart Cities programmes





Key features

- Continuous monitoring with readings every minute
- Interchangeable parameter configuration – unlimited selection of air quality parameters in addition to temperature, humidity and pressure (standard sensor board accommodates up to 6 air quality sensors, expansion board allows limitless configurations)
- Ability to integrate SGS SmartSense data into third-party applications with API data feed
- Capture validation samples for accredited lab analysis with the SGS SmartSampler, an integrated sample initiation system

Cloud platform features

- Access, analyze, download sensor data at anytime, anywhere in the world via any connected device
- View device locations on a map and see the latest real-time data feeds via SmartSense Live View
- Customize sensor alarm thresholds to be notified via text and email
- Take autonomous grab samples when paired with the SGS SmartSampler



04 Events & participations



■ Women's Day Celebration

SGS Pakistan celebrated INTERNATIONAL WOMEN'S DAY to honour our female staff as they are doing great work with a significant role in the growth of SGS Pakistan. The international theme for this year was "#EMBRACE EQUITY".

Celebration started with the comments from Businesses, Functional Managers and different female colleagues who shared their experiences and success stories, followed by Motivational speeches by guest speakers Ms. Shumaila Omer from Rotary Club-Karachi and Ms. Falak Zehra Mohsin from KSBL University. The session concluded on cake cutting, distribution of gifts and group photo.





■ Participated and sponsored in “Asset Integrity and Reliability show Middle East – Oman”

SGS Pakistan sponsored and participated in “Asset Integrity and Reliability show Middle East – Oman”. Our Managing Director Mr. Abdul Razzak Lakhani participated in the event along with Mr. Tanveer Ali, Head of Civil Structural Integrity and Lab Testing, who also presented on Integrity Management and Health Assessment of Existing Structures

The Asset Integrity and Reliability Show is one of the annual platform in the Middle East where Asset Integrity professionals come together to address critical integrity and process safety challenges, benchmark strategies to enhance operational efficiency of ageing assets and increase profits. Few of the key clients participated are OQ, PDO, Daleel, ARA, OXY Oman, Petrogas, OPAL Kuwait Oil, SABIC, SADARA, ADNOC LNG) Process Safety Management.





■ SGS expert participated in panel discussion on “Pakistan Accord on Health and Safety In The Textile And Garment Industry” at ASSP Pakistan Chapter’s 4th Professional Development Conference

Mr. Faraz Ali Manager Public Safety services participated as subject matter expert in panel discussion on “Pakistan Accord on Health and Safety In The Textile And Garment Industry” at ASSP Pakistan Chapter’s 4th Professional Development Conference.

During the discussion he shared road map on how structure and electrical system integrity along with fire safety can contribute to Safe Textile and Garment industry in Pakistan. Our other team members from also attended the event and shared their experiences to contribute to the promotion of occupational health and safety culture in Pakistani workplaces. The event was attended by ministers, high ranking government officials, prominent industrialists, and HSE professionals.





SGS Exhibited in Pakistan Mega Leather Show 2023

SGS Pakistan exhibited in Pakistan Mega Leather Show 2023 held from 1st – 3rd Feb 2023 at Expo Centre Lahore. The event was attended by major stakeholder and industrialist, who they visited SGS stall and discuss about new testing methodologies and advancement in textile sector.



■ SGS Exhibited in Pakistan International Maritime Expo & Conference (PIMEC)



SGS Pakistan exhibited in Pakistan International Maritime Expo & Conference (PIMEC) held from 10th – 12th Feb 2023 at Expo Centre Karachi. The event was attended by International Clients and major stakeholder. SGS team brief client solutions for key challenges that are being faced by maritime industry including Ports and Mercantile Shipping sector, hydrocarbons extraction, coastal development, fisheries, marine tourism, offshore renewable energy, aquaculture, seabed mining, marine biotechnologies, maritime security as well as Defence/Naval technologies.





SGS Exhibited in 24th Textile Asia International Trade Fair 2023

SGS Pakistan exhibited in 24th Textile Asia International Trade Fair 2023 held on 10th - 12th Mar 2023 at Expo Centre Karachi. In the exhibition approx. 225 Foreign Exhibitors and 270 Local companies participated. This Exhibition is the South Asia's Largest Textile Industry Fair which is the most promising and enduring Textile Industry Show.

The aim of the exhibitions was to enhance the buying- selling potential of Textile & Garments Machinery, Clothing Textile Accessories, Textile Raw Material Suppliers, Weaving Machines, Spinning Yarns, Textile Dyes & Chemicals, Embroidery Machines, Power & Air Compressors for the Textile Industry and Textile Allied Services.





■ Our female staff participated in summit “Unlocking the power of Women Entrepreneurs”

SGS female staff participated in summit “Unlocking the power of Women Entrepreneurs” organized by IBA Aman Centre for Entrepreneurial Development. The event included a panel discussions and product showcasing. Women entrepreneurs from different fields share their life experiences, their struggles & challenges, and what enabled them to become empowered entrepreneurs.





05 Webinars & workshops organised

■ Complimentary session on Applicable HSE Requirements for Hotel Industry

SGS organized inhouse complimentary session on Applicable HSE Requirements for Hotel Industry. Health and safety law applies to all businesses, no matter how small. Businesses in the catering and hospitality sector report many major injuries to HSE every year. Beyond the obvious human costs, accidents also cost money and time – people off work, material costs and damage to buildings, equipment or product. Training and awareness session for staff on the appropriate safety measures is one of the main ways to reduce the risk of hazards. To address market need, SGS hosted an exclusive Half-Day complimentary session on Applicable HSE requirements for hospitality sector where participants from different hotels participated and thanked SGS for its contribution towards ensuring health & safety.



■ Session on Importance of NDT in Inspection for Students of Mehran University



SGS organized inhouse complimentary session on importance of NDT in Inspection for Students of Mehran University. Visit included awareness session, Laboratory visits. Student were also briefed on inspection techniques during the technical discussion.





■ Webinar on Revolutionizing Asset Integrity Management – IMS Software

The webinar on “Revolutionizing Asset Integrity Management – IMS Software” was organized by SGS in collaboration with our software solution provider. In the webinar, speaker shared the key feature of the AIM software that could help clients to run their operations efficiently, safely, and as sustainably as possible while supporting them through their digital transformation journey.

■ Webinar on Structural Health Assessment

SGS organized an awareness session on Structural Health Assessment in January 2023. Our subject matter expert Muhammad Mehdi facilitated the session and discussed at length about the importance of Structural Health Assessment (SHA) to check the health of existing structure, assess the extent and nature of damages and to make an existing inadequate structure safe for further operations.

■ Webinar on Inspection Schemes Development for Pipelines & Cathodic Protection Systems

Webinar on Inspection Schemes Development for Pipelines & Cathodic Protection Systems was organized where our subject matter expert Mr. Khurram Zaka – Team Lead PIMCP services deliver the session. The main objective of the session was to help clients to focus on reducing pipelines operation costs, while still maintaining an acceptable reliability & safety level.

■ Webinar on Ex Assets Life Cycle Management

Webinar on Ex Assets Life Cycle Management was organized where our subject matter expert Muhammad Imran Ali – Team Lead for IECEX services deliver the session. Objective of this webinar was to help clients understand the requirements for Ex Assets Life Cycle Management to ensure proper selection, installation, operation of equipment to mitigate the risk of fire which may lead to incidents.



■ Webinar on Connecting people, skills and technology: Any device, anywhere – SGS QiiQ



Webinar on Connecting people, skills and technology: Any device, anywhere – SGS QiiQ was organized and conducted by Team Lead Supply Chain services Ms. Mahira Yameen. The session comprises on details of QiiQ remote inspection app where It can be installed on an unlimited number of devices, such as any office or mobile device (laptop, tablet, mobile phone or smart glass). Session help clients to understand how they can improve your QA/QC with remote inspection that will protect your intertest especially when buying and selling overseas.

■ Webinar on Fitness for Service Assessment of Safety Critical Components

The webinar on Fitness for Service Assessment of Safety Critical Components for Middle East Region clients where our speaker Dr. Muhammad Kashif and SGS team lead for Asset Integrity Services Mr. Waseem khan conduct the session. The main objective of this webinar was to provide information on the use of assessment codes to determine the residual strength of structures in service life after the incidence of damages and plastic deformation.



Highlights from our other services

■ Expansion of Geological Services by offering Satellite mapping, XRF surveys & subsurface data acquisition at mine site

SGS Minerals Services provides tailor-made services across the full geological spectrum and pleased to announce that recently we have expended our services by including Satellite mapping, XRF surveys & subsurface data acquisition at mine sites. Our geological services bring the disciplines of geology, geo-statistics, and mining engineering together to provide accurate and timely mineral project evaluation solutions.

Our machine learning technologies are focused on finding new ore bodies, evaluate risk, and determining potential for mineral resource expansion, instead of just optimizing operations. SGS Pakistan Geostat's technical leadership ensure effective solutions for exploration and mining challenges and is well equipped to minimize operational and financial risks. Following services has been added in Minerals Exploration portfolio.

- Satellite mapping for identifying Host Rock available at mine site.
- Mine site surveys / analysis utilizing modern scientific methods & equipment i.e. XRF Survey.
- Mineral's resource subsurface data acquisition and intervention by Geophysical.

■ Establishment of Coal testing laboratory at Tharpaker Sindh

We are pleased to share that SGS Minerals services has established Coal testing laboratory at Tharpaker Sindh. Thar coalfield located in Thar Desert, Tharparkar District of Sindh which is Pakistan's largest coal reserves area with the deposit of approximately 175 billion ton and is the 16th largest coal reserve in the world.

Regular evaluation of coal quality is essential to eliminate penalties and maximize profits. SGS Pakistan offer a comprehensive suite of analytical services to meet the needs of coal producers and our qualified technicians operate in laboratory with state-of-the-art instrumentation, providing the utmost attention to accuracy, reputable methodology and reliable operating procedures.





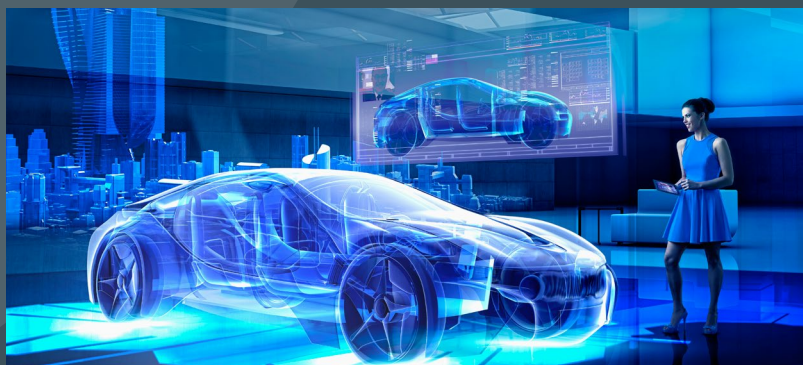
SGS now offers Food Contact Material testing

Food contact materials testing is used worldwide to make sure that food is not contaminated by the products it comes into contact with. SGS Pakistan Consumer & Product services pleased to announce that we have now developed capability to offer Food Contact Material Testing services as per European Regulations, China & FDA standards requirements for our valuable clients from Packaging Manufacturing, Food Chains, FMCG, Super Marts and end consumer to ensure that their products comply with the appropriate regulations for food contact materials.



Initiated Material testing & certification for Automotive industry

SGS Pakistan Consumer & Product services is now offering Automotive parts Testing services, such as Physical Testing, Chemical Testing, Material Testing, RoHs, REACH, etc. to automotive manufacturers, Material providers, automotive parts providers. Pakistan's auto market is among the smallest, but fastest growing, in Asia and Pakistan is the 35th largest producer of automobiles.



Health and Well-being



SGS Cricket Champions Trophy 2023

SGS Champions Cricket Trophy was organized in January, 2023. Total 09 teams participated representing their departments, it was not only a Champions Cricket Trophy, it was also a team-building activity that created synergy among each departments. The Final match played between Minerals Vs Agriculture Food & Life Congratulations! Winner Team – SGS Mineral





■ Alishan Inter firms table tennis tournament 2023

SGS Team participated in table tennis tournament 2023 organized by Alishan Inter firms.

Group A comprises of – PSO, EFU, SBP. SGS, and Orient Energy System teams participated and in Group B there were teams from Allied Engineering, PSO, EFU, SBP and Perl confectionery played. SGS team succeeded to qualify for Semi-final and event was thoroughly enjoyed by the audience and teams.



Reader's feedback

- We welcome your feedback and suggestions about our newsletter at pkindiv.mkt@sgs.com
- SGS Pakistan encourages your contribution to our newsletter by sending in your Technical Articles at pkindiv.mkt@sgs.com

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WHEN YOU NEED TO BE SURE

