



**asco**  
International

aria sina control  
international technical  
inspection co.

# Global Transparent Independent

[www.asco-intl.com](http://www.asco-intl.com)

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## Our Business

Founded in 2011, asco is one of the largest inspection service providers to the Commerce, Shipping, and Insurance industry. With highly trained and motivated employees.

Whatever your business, asco comprises several inspection services to guarantee that your products meet standards. These services fall into the following categories of Agricultural goods, Food and Pharma, Commodity, Industrial and project, Rail and Railway Transport Systems, Drilling, Crane, Lifting Equipment and Installation, CNG Stations, Vehicle Type Approval, Oil, Petroleum and Petrochemical Products, Handicrafts, Risk Assessment, and Insurance, Risk-Based Inspection, Fitness for Service, Pipeline Integrity Management Systems, and Consultation and Quality assurance.



## Vision

Offering services sans geographical boundaries and acquiring knowledge in the major fields of inspection.

## Mission

Offering applaudable services based on national and international standards and instructions, to reduce production risk using modern inspection techniques.

## Values

- General satisfaction
- Transparency in all activities
- Customer privacy
- Honesty in all policies
- Applying standards in all activities



asco international is proud to be the sole representative of CERES GmbH in Iran, to carry out the inspection and sampling of agfood production and processing facilities in the region and be an active organization to spread out awareness about "healthy food" and "certified product" to help improve society's health.

Department of Agfood production and Processing inspection (AP) of asco intl., with educated and competent inspectors, branches and offices based in Iran and other countries around the world, with the aim of reducing service fees compared to other foreign companies, is able to inspect and certify your products for local and global markets.



Implementation of 'production standards' ascertain health for human, food sources, and eventually environment. Some of these standards fall into following categories:

- Organic
- GLOBAL G.A.P
- Maximum Residue Limits
- Halal
- Quality inspections and sampling of foodstuff
- Good Manufacturing Practice standards

## 1. Organic

The International Federation of Agricultural Organic Movements (IFOAM) defines

**"...Organic Agriculture as a production system that sustains the health of soils, ecosystems and people and relies on ecological processes, biodiversity and cycles adapted to local conditions..."**

In other words, organic is the product of completely natural resources, without the use of any chemical substances such as chemical fertilizers and pesticides.



## Different kinds of organic standards:

- EU organics (EC regulation 834/2007)
- NOP (National Organic Program)
- COR (Canadian Organic Regime)
- JAS (Japanese Organic Agricultural Plan)
- Organic 11000 (national organic plan of Iran)

## Benefits of organic production:

- New local and international markets
- Higher prices of organic products compared to conventional
- Gain of customer trust and increase of credibility
- Consumer health on top of the agenda with producing wholesome food
- Worker's health
- Soil erosion reduction
- Soil fertility improvement and preservation of soil beneficial organisms

## Our organic inspection plans:

- Crop production inspections: farm, greenhouse, mushroom farming, etc.
- Processing facilities inspections
- Wild collection inspections: medicinal plants, herbs, wild mushroom
- Organic certification and labelling
- Certification of Inspection (Col) or Transaction Certification (TC)



## 2. Global GAP

Good Agricultural Practice (GAP) covers each and every step of production from land preparation and seed plantation to final product. Regarding this, GLOBAL G.A.P is suitable for farmers who responsibly control and observe every step of their production.

G.A.P relies on technical principles. In this process, the minimum amount of chemical substance is used and most of the farm management relies on integrated methods, such as Integrated Nutrition Management (INM) and Integrated Pest Management (IPM).

Other requirements consist of lands free of heavy metals, products free of mycotoxins (toxins which remain in products as a result of microbial activities after processing or in storage stage). asco intl., the sole representative of CERES GmbH in Iran, is able to certify your production unit after assessment of the documents and production method.

### Good Agricultural Practices goals:

- Reducing physical, chemical and microbial pollutants to a minimum to ensure food safety
- Improving quality of the food
- Reducing agricultural destructive impact on environment
- Ensuring worker's health and safety

### 3. Maximum Residue Limits

Iranian National Standards Organization and administration of agriculture issues standards for production, processing and distribution of "healthy food" to maintain a maximum residue limit. By the help of accredited inspection bodies, they make sure that mentioned production units are in compliance with these standards. Agricultural pollutants, called "residues", are substances such as heavy metals, pesticide and fertilizer residuals, and mycotoxins. Currently, for reducing and controlling these substances, regarding their dangerous effects on human body, related standards are being implemented.



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### Benefits of having "MRLs" certification:

- Increasing demand for certified and healthy products, thus higher price in the market
- Preserving consumer right
- Reducing production costs by standardization of input use
- Improved and sustainable yield
- Reducing toxins in soil and water
- Improving soil fertility and prevention of soil texture change

**This certification is valid for 3 years and yearly inspections and report to agriculture organization are compulsory.**

Maximum Residue Limits standards:

- Maximum residue limits of pesticides
- Maximum residue limits of nitrate
- Maximum residue limits of heavy metals
- Maximum residue limits of mycotoxins

### 4. Halal

Islamic economy, due to Muslim values and beliefs around the world, is a vast and ever-growing economy. Besides, increased awareness about Halal certified products, has made organizations to think about either producing or certifying halal products for this market. Muslim countries (approximately 1.8 billion halal user) and even non-Muslim countries such as Japan and Korea, are in an increasing demand for halal certified products. Thus, the need for certification process (with more than 2 trillion dollars' worth in food and beverage, fashion, cosmetics and drugs market) is rising.



### 5. Quality inspections and sampling of foodstuffs for export and import

Although foodstuff and agriculture products are made in different parts of the world in different circumstances, the production standards are usually the same. For example, Hazard Analysis and Critical Control Points (HACCP) in ISO 22000 is being used extensively. To mention other standards:

- British Retailers Consortium (BRC)
- European Food Safety Inspection Service (EFSA)
- International Featured Standards (IFS)
- Global Food Safety Initiative (GFSI)
- Grain and Feed Trade Association (GAFTA)

asco Intl. offers these inspections and certification services in the following fields:

- Sampling and performing test to ensure compliance to the standards
- Quality inspections before cargo loading
- Reducing time consuming procedures in customs
- Supervision in loading, transfer or unloading of the product as per request of the client



## How to apply for inspection and certification

Methods and regulations in each one of the mentioned fields are different, but the procedure for getting certified is almost the same. asco intl., with its educated, competent and experienced inspectors, is able to perform these inspections and samplings according to the client's request. After assessing your documents, production unit and making sure it is in compliance with the standards, a certificate will be issued to you.

### To get certified, you can act as below:

1. Formal request: Our coordinators in office will help you through the process.
2. Assessment and contract: We will assess your documents, send you an offer and a contract will be signed after the agreement.
3. Inspection and sampling: our inspector will perform the inspection and sampling on the approved date. In case of critical non-compliances or under certain circumstances, a second inspection might be needed.
4. Report and decision: After assessing documents and reports, and after elimination of non-compliances, related certification committee will issue the certificate.

## 6. Good manufacturing Practice validation for foodstuff imports

Good Manufacturing Practice (GMP) are certain standards used for food and beverage, cosmetics, pharmaceutical products, dietary supplements and medical devices production, with the purpose of detecting and preventing harm to consumers' health.

Currently, foodstuff and beverages trades play important roles in economy. However, countries should make sure that the imported food is safe and healthy. For ensuring that the product is in compliance with the standards, food and drugs administration of Iran is doing the validation by the help of accredited inspection bodies.

asco intl., with the supervision of food and beverage department of FDA, performs these inspections and validations in country of origin, and reports to Iran's FDA and they will decide whether the product is safe to enter the country.



Depending on capable forces, a worldwide network, and cooperation with approved laboratories, asco is ready to provide inspections at home and abroad. Commodity inspections divide into two groups according to customer needs:

## 1. Pre-Shipment Inspection (PSI)

These inspections inform the buyers about the purchased goods status, such as product quality and the cargo quantity. In general, the benefits of pre-shipment inspection (PSI) or inspection at the origin include the following:

- Sampling and testing to check cargo compliance with its related standard (COI Issuance)
- Ensuring the soundness of the goods before loading
- Goods packaging inspections to ensure the soundness of the goods in the process of transportation
- Inspection of compliance of quantity of goods with shipping documents (weight, number packaging, etc.)
- Reduction of customs costs during clearance

Also, to complete the process above and guarantee the quality of goods, asco international is ready to provide the following services:

### 1-1. Packaging Inspection

These inspections check the compliance of the goods with the order, relevant standards regarding the vulnerable goods, and the ones with identification of inspected and tested goods; inspectors attach labels and seal the cargo.

### 1-2. Loading Supervision

Since damage mainly occurs during delivery, we offer to supervise the delivery; based on customer requests.

### 1-3. Color Marking

asco international offers to mark goods to help differentiate customer products from cargo interference, misplacement, and weight differences. Color marking happens simultaneously with the inspection to separate customer goods (discharge supervision service is also part of the inspection process).

## 2. Discharge port inspection

Destination inspections mainly approve goods for the banking system, using visual inspections to confirm the quantity and visual quality of goods in the destination ports.

### 2-1. Discharge Monitoring

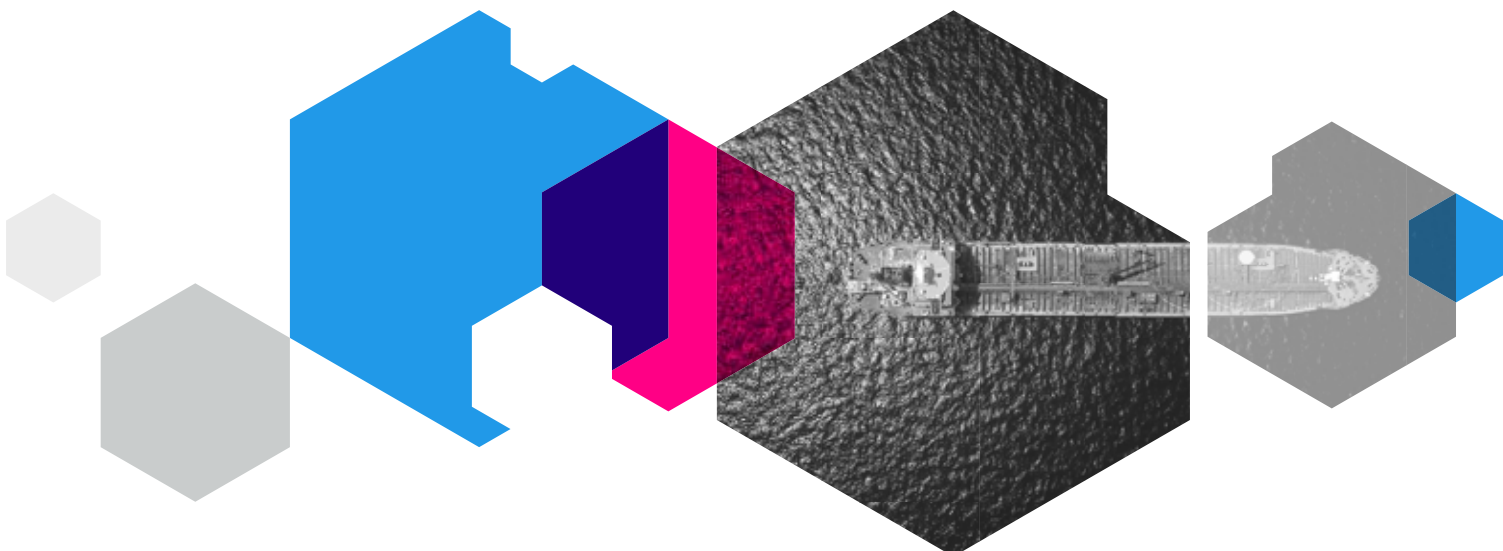
tracking the unloading of commodities to inform customers of the damage to the articles during transportation and unloading.

### 2-2. Condition Survey

These inspections determine the extent of the damage to the damaged goods and prepare a report for judicial follow-up and claim damages.

### 2-3. Sampling

Sampling of goods in loading ports intended for export cargoes or compliance with the standard for imported goods containing the mandatory standard.



## Metal

Due to the wide range of steel imports and exports and the importance of iron and alloying elements in the industry, ensuring the accuracy of the chemical and physical structure of ferrous and non-ferrous alloys is an important factor in selecting and applying these materials.

asco using an extensive network, specialized forces, cooperating with reputable and approved laboratories and recognizing the sensitivities of customers about alloys, including chemical properties (percentage of elements such as carbon, manganese, chromium, etc.) tensile strength, elongation, hardness, etc. and metallurgical is ready to provide services.

- Additional coating tests for other metal materials such as tin-plated and zinc-coated sheets.
- Dimensional inspection of goods such as thickness, length, and width of sheets, rebar, and other metal products.

All the steps above should happen in the presence of the inspector. The result of the inspection must be presented to the customer to be informed of the status of their commodities before loading to make the necessary decisions.



## Mineral

The scope of inspection specified in this group of materials is, measuring the amount of moisture, grain size, and percentage of elements.

asco international's mineral inspection department has been able to satisfy countless customers domestically and abroad by inspecting a large volume of various minerals with experienced personnel, experienced inspectors, and using the network of certified laboratories.

Most of these materials are:

- Metal ore: Iron ore, chromium, manganese, lead, zinc, and chromite.
- Coal and coke.
- Iron and non-ferrous concentrate
- Cement, decorative iron ore, Clinker, salt, gypsum, and building materials

**The issued inspection report with the test results are a valid certificate that confirm quality; In such cases, the inspection report will be an export certificate.**



## Chemical & Petrochemicals

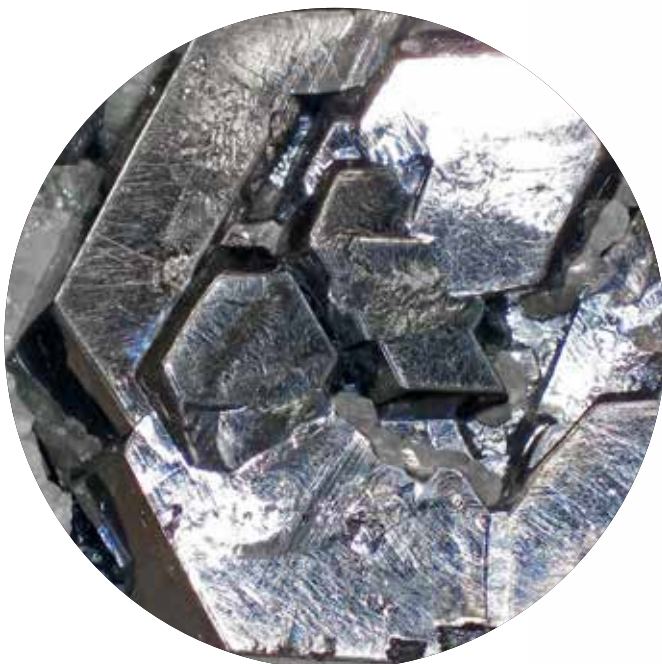
Inspecting chemicals in the export field, relying on the company's branches and agencies in the country's major ports and customs as representatives of the Iranian Standard Organization Offices, is ready to provide a variety of inspection and sampling services for oil and petrochemical shipments and dispatch to approved laboratories in the shortest time.

In the field of imports, inspection services are performed; according to the customer's requirements and the relevant specifications and standards which are applied on commodities subjected to mandatory standards. Among the important issues in the quality of chemical products that are controlled by the company's expert inspectors, the following can be mentioned:

- Chemical analysis
- Checking physical properties, such as product uniformity, moisture content, density, viscosity, drop point, flash point, etc

The existing sensitivities regarding the packaging and transportation of chemicals have led to the following points being reviewed and announced by the asco inspection staff, to prevent any defects and damage to customers' goods in the transportation process or possible dangers for people in contact with these materials.

- Checking MSDS documents and issuing
- Reactivity of the desired product in the presence of other substances
- Using moisture-absorbing materials if needed
- Packaging light-sensitive goods



## Other Services

### 1. Price verification inspection

Due to sanctions and the impossibility of inquiring prices, especially in the case of sensitive goods imported by complex methods and many transshipments, the need for transparency in the true price of commodities (which varies with the value of goods) is felt more than in the past.

Due to depositing 200,000€ in the central bank, obtaining the required licenses, and The International Network of Expert Inspectors, the company can inspect and verify the price of goods, mostly imported goods.

One of the services provided to banks and importers of goods is verifying the price of goods to receive bank documents.

Also, price verification is required; for insuring imported goods, which requires standards for transportation, loading, and unloading and includes many damages.

### 2. Container inspections

One of the services in this field is container inspection before stuffing and ensuring the standardization of containers.





The oil, Petroleum Products and Petrochemical Products department of asco international, is certified by the "supervision on petroleum export & domestic transactions" organization. Using experienced inspectors and staff that are stationed in the ports of Bandar Abbas, Imam Khomeini, Assaluyeh, Bushehr, Anzali, Nowshahr, Amirabad, Neka.

In this department, imported and exported commodities are inspected based on qualitative and quantitative measurements which include petroleum and petrochemical products.

## 1. Petroleum Products

- Crude oil
- Fuel oil

## 2. Petrochemical & Acidic Products

- Methanol, Ethanol, Poly Ethylene and Benzene
- Base, industrial and edible oils
- MEG, DEG, DPG
- Xylenes
- Sulfur
- Urea
- Tar
- Wax
- Monomer
- Ammonia
- Costic Soda

## 3. Other activities

- Quantitative and qualitative inspection of ships carrying oil, chemical, and gas materials
- Quantitative and qualitative inspection of bulk carriers (Draft Survey)
- Quantitative and qualitative inspection of petrochemical products
- Quantitative and qualitative inspection of coastal



## 1. Inspection of industrial goods

One of the activities asco provides is the approval of materials and equipment. The company supplies inspection certificates and reports; based on the compliance of materials and equipment with international standards or customer requirements. Such inspections happen in factories, sites of ports inside and outside the country.

The scope of inspection activities based on the nature of the project, importance, sensitivity of the equipment, materials, and technical domains; can be classified into the following categories:

- Seaworthiness, packing and marking inspection
- Vendor shop inspection and test
- Loading supervision
- Price verification inspection
- Pre-shipment inspection
- Sampling and analysis

## 2. Technical shop inspection

In various industries such as oil, gas, petrochemical, mining, and power plants, large projects require purchasing numerous equipment from different manufacturers. The quality of each of these pieces is critical to the project, to ensure the quality of raw materials, for the final product is inspected at the manufacturer's location.

Inspections during equipment manufacturing can include raw materials inspection, visual inspection, NDT inspection, and monitoring of mechanical and functional tests. To maintain the quality of equipment according to the client requirements, asco international performs technical shop inspections during the construction of equipment based on the scopes below:

**Performing in-process and commissioning inspection for types of equipment including but not limited to:**

### 2-1. Mechanical Inspection

- Pressure vessels, heat exchangers, reactors, boilers, furnaces, storage tanks, industrial pumps, pipes, bridges, cranes, turbines, compressors, fiber tanks and pipelines, construction projects, industrial machinery
- Steel structures inspection
- Inspection of transmission and process pipelines

### 2-2. Electrical and Instrumentation Inspection

### 2-3. Coating and Insulations Inspection

- Sandblasting & shot blasting
- Painting, Cladding, Metal Spray
- Cathodic Protection

### 2-4. Corrosion control and material protection

- Monitoring of metallography test
- Corrosion Analysis
- Failure Analysis
- Mechanical Property
- Chemical Composition

### 2-5. Weld, NDT, Advanced NDT

- Phased array UT
- Long-Range Ultrasonic (Guided Wave UT)
- Acoustic Emission
- Digital Radiography (DRT)
- Eddy Current Testing (ECT)
- Low-Frequency Electromagnetic Technique (LFET)
- Saturated Low-Frequency Eddy Currents (SLOFEC)
- Remote Field Eddy Current Testing (RFT)
- Magnetic Flux Leakage
- Metal Magnetic Memory (MMM)
- Reliability Centered Maintenance
- Fault Free Analysis
- Failure Mode, Effect, and Critically Analysis

## 3. Installation and Commissioning Inspection

These inspections include various industries, including oil, gas, petrochemical, power plant, mining, and factory construction, which are to assess quality based on the construction plan accurately.

In this regard, asco International company will monitor the manufacturing and installation process from the arrival of materials and equipment until the operation and commissioning by employing experienced and specialized people and using the necessary tools and expertise, according to the standards and client requirements.

## 4. Operational and Overhaul Inspection

Overhaul inspection ensures the instrument's health, need for repairs, and/or maintenance measures. Periodical overhauls are performed based on the clients' decision on a specific equipment category, depending on the application type. Such inspections and measurements are to report the condition/ after conducting an overhaul inspection. asco issues safety and performance certificates until the next overhaul inspection.

## 5. Construction projects

Construction Department is responsible for monitoring construction, including inspection and monitoring of the implementation of approved processes.

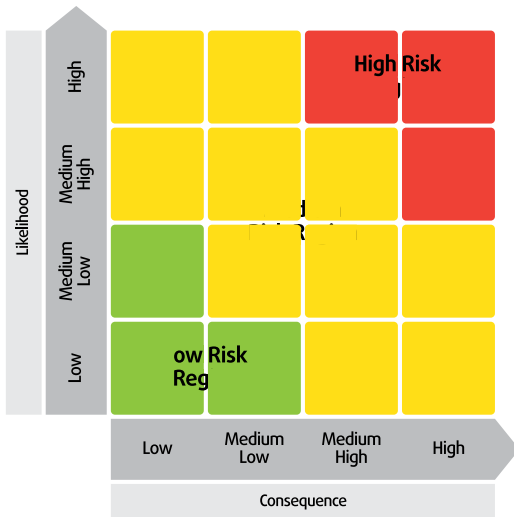
## 6. Expediting services

Expediting is one of the activities involved in the successful implementation of projects. It helps the manufacturing process to the project planning and minimizes the delays and costs caused by the products' unpreparedness. To monitor and track the progress and control the projects in critical situations, asco international specialists will present at the site to ensure the construction progress based on the project schedule and plan.



## RBI (Risk-Based Inspection)

Risk Based Inspection (RBI) is an optimal maintenance business process used to examine equipment such as pressure vessels, heat exchangers and piping in industrial plants. RBI is a decision-making methodology for optimizing inspection plans. The RBI concept lies in that the risk of failure can be assessed in relation to a level that is acceptable, and inspection and repair used to ensure that the level of risk is below that acceptance limit. It examines the Health, Safety and Environment (HSE) and business risk of 'active' and 'potential' Damage Mechanisms (DMs) to assess and rank failure probability and consequence. This ranking is used to optimize inspection intervals based on site-acceptable risk levels and operating limits, while mitigating risks as appropriate. RBI analysis can be qualitative, quantitative or semi-quantitative in nature.



Probability of Failure (PoF) is estimated on the basis of the types of degradation mechanisms operating in the component. It is calculated as the area of overlap between the distributions of the degradation rate for each degradation mechanism (based on uncertainties in rate) with the distribution of the resistance of the component to failure. Consequence of Failure (CoF) is defined for all consequences that are of importance, such as safety, economy and environment. Consequence of failure is evaluated as the outcome of a failure based on the assumption that such a failure will occur.



Accuracy is a function of analysis methodology, data quality and consistency of execution. Precision is a function of the selected metrics and computational methods. Risk presented as a single numeric value (as in a quantitative analysis) does not guarantee greater accuracy compared to a risk matrix (as in a qualitative analysis), because of uncertainty that is inherent with probabilities and consequences. RBI is most often used in engineering industries and is predominant in the oil and gas industry. Assessed risk levels are used to develop a prioritized inspection plan. It is related to (or sometimes a part of) Risk Based Asset Management (RBAM), Risk Based Integrity

Management (RBIM) and Risk Based Management (RBM). Generally, RBI is part of Risk and Reliability Management (RRM). The basis of most RBI programs is the Corrosion Circuit, in which each circuit can be compared for relative risk levels to aid in inspection and maintenance planning.

Risk-Based Inspection (RBI) is an analysis methodology and process that, as opposed to condition-based inspection, requires qualitative or quantitative assessment of the probability of failure (PoF) and the consequence of failure (CoF) associated with each equipment item, piping circuits included, in a particular ...

Risk based inspection (RBI) is an asset integrity management methodology used to prioritize assets for inspection based on associated risks. By focusing inspections on priority assets, RBI maximizes resources by concentrating them on equipment with higher risks while avoiding assets with inconsequential risk.



## FFS (Fitness for Service)

Fitness for Service (FFS) is a best practice and standard used by the oil & gas and chemical process industries for in-service equipment to determine its fitness for continued service. FFS serves as a rational basis for defining flaw acceptance limits and allows engineers to distinguish between acceptable and unacceptable flaws and damage based on industry recognized and generally accepted good engineering practices (RAGAGEP).

The FFS of any particular material is determined by performing a fitness-for-service assessment per standardized methods and criteria. Performing accurate FFS evaluations is an integral aspect of fixed equipment asset integrity management as an alternative to using the original construction design code. The FFS of a piece of equipment may be viewed both in terms of current and future FFS or remaining life.

Most equipment can continue in service despite small flaws, and to repair or replace equipment that can still be used would be an unnecessary and costly expense. In addition, unnecessary weld repairs can do more harm than good and create unnecessary risks to personnel in many cases.

API RP 579-1/ASME FFS-1, Fitness-For-Service is one example of a FFS methodology currently used by industry professionals. In general, most FFS assessment standards are broken into multiple levels. Each successive level (e.g., Levels 1, 2 and 3 of the referenced API 579-1/ASSME FFS-1 standard) requires increasing amounts of data, calculations, effort, and cost to arrive at the most accurate outcomes and possible longer equipment remnant life. In addition to calculations, FFS involves the consideration of additional data (e.g. pitting patterns and depths, corrosion morphology or shape and depth, crack depths and lengths, operating conditions, materials properties, etc.). Inspection information is often critical input to a FFS assessment.

Fitness-for-service assessments are quantitative engineering evaluations performed to demonstrate the structural integrity of assets. DNV GL has extensive experience with fitness-for-service assessments on various assets (pressure vessels, pipelines, offshore-structures, etc.) – helping oil and gas operators make “run-repair-replacement” decisions.

## PIMS (pipeline integrity management)

Pipeline integrity management systems (PIMS) provide the overarching, integrated framework for effective pipeline asset management. Significant failures in both gas and liquid pipelines have made global headlines. There is no single correct “formula” for developing an integrity management system; however, this chapter outlines the fundamental basics of an effective management system that have been successfully integrated in companies across the world. Industry groups such as International Association of Oil and Gas Producers and the American Petroleum Institute (API) have developed guidance documents that can be used as additional references for developing management systems. The chapter covers downstream, midstream, and upstream oil and gas pipelines. It reviews the latest industry and regulatory documents pertaining to both safety management systems (SMS) and PIMS. The codes, standards, and regulations that govern the pipeline industry continue to change in response to lessons learned from industry failures.

Pipeline Integrity safeguards the pipeline, ensuring all its components are working properly and no harmful chemicals are released from the pipeline. This means, from designing to operating pipelines, everything is reliable, efficient and safe. ... Prevention against pipeline corrosion.



asco supports rail manufacturers, operators, and authorities with a comprehensive portfolio of inspection, testing, certification, and training services to ensure safe and reliable railway transportation. Our competencies in the conventional, metro, and light rail are backed by expert experience, vast background in rail projects, collaboration with railway authorities, and stakeholders. We can support you with our testing services at every stage of your project lifecycle, helping you avoid costly rework or project delays.

asco provides solutions in the following subjects:

## 1. Complete System Services

Complete system services require knowledge of the entire railway system and its subsystems such as infrastructure, rolling stock, signaling, experience in operation, and maintenance. Authorities and train operating companies need to ensure that both traditional and modern technologies are correctly and safely integrated across the complete rail system.

## 2. Rolling Stock and Component Services

Railway vehicle manufacturers, suppliers, and rolling stock operating companies require meeting mandatory, voluntary, and contractual requirements for the construction, commissioning, and operation of rolling stock and components. asco can provide independent, third-party assessment of rolling stock and components to ensure compliance with relevant standards.

## 3. Railway Signalling Services

Rail signaling services help operators, railway project managers, and manufacturers to ensure that their crucial rail signaling equipment functions safely and reliably. It is essential to ensure that safety, performance, quality, and interoperability objectives are met as cost-efficiently as possible.

## 4. Rail Infrastructure Services

Railroad safety depends on sound infrastructure and reliable systems. Railway infrastructure services include a comprehensive analysis of your entire rail network to ensure that all infrastructure subsystems like superstructure, earthworks, civil works, tunnels, and E&M (electrical and mechanical systems) meet the requirements of relevant standards and quality.

## 5. Rail Power Supply Services

Rail power system services support the railway industry with independent verification in optimizing their railway power supply systems to accommodate rising energy demands, ensure

constant availability, and meet energy efficiency requirements. Due to growing challenges, aging assets, and complex operating environments, manufacturers also have to ensure that new components and complete systems are designed with reliability, availability, maintainability, electromagnetic compatibility (EMC), and electrical safety in mind.

## 6. Functional Safety Training

Constantly changing functions in mobile and stationary systems require experts and companies in the rail industry to reach high levels of expertise, particularly with regards to functional safety, to master this complexity.

This can be achieved with our training programs. Our Courses cover overall functional safety according to IEC standard, and other railway specific standards like EN 50126, EN 50159. Our training courses can be customized to your specific needs.

## 7. Consultation services in the field of education and incidents

asco can provide the necessary consultation in the established field of quality assurance systems and staff training and accidental analysis.



asco international drilling inspection services is a quality-focused provider of inspection services to the drilling industry.

We are approved by all of the major classification agencies to provide the inspection services below on all mobile offshore and onshore drilling rigs:

## 1. Derrick inspection

asco provides inspections for derrick as per API RP 4G guidelines – which are the recommended practices for use and procedure for inspection, maintenance, and repair of drilling and well-servicing structures. Qualified personal will carry out derrick inspection (Category III) survey in line with API RP 4G. inspection focuses on load-bearing components and members to determine the condition of mast/derrick and substructure. A comprehensive report as per the template of API RP 4G is prepared and submitted to the client with recommendations.

## 2. Dropped objects prevention

We can help prevent a potential dropped object from becoming another unwelcome safety statistic by conducting a detailed dropped object survey of hazardous areas. We are all committed to preventing harm to personnel and damage to equipment from dropped objects. asco provides qualified inspectors to conduct a thorough dropped object survey of the derrick and other areas as required.

## 3. Rig survey and certification (Certificate of Fitness / COF)

Our rig inspection services can help you optimize your drilling rig or provide you with an in-depth indication of the technical state of the drilling rig you intended to hire.

Our inspection services cover:

- Full rig condition survey
- Dropped-objects survey
- Main & Auxiliary equipment
- Mud systems
- Cranes and hoisting systems
- Well control equipment
- Marine and safety equipment
- Rig acceptance and safety surveys
- Reviewing of certification, ensuring conformance on critical good control and drilling equipment
- Reviewing of NDT reports and lifting databases
- Reviewing past audits and updates on the status of action items

## 4. Casing and tubing inspection services

Inspection of used and brand new casing or tubing is carried out by API Spec 5CT, API RP 5A5, and API RP 5A3. The general scope shall

include:

- OD Blasting
- ID Cleaning
- Spot Wall Thickness Measurements
- Grade Sorting
- EMI on Body-Tubing
- Visual Thread Inspection
- Full-Length Drifting
- Ultrasonic test on slip and upset area
- Black Light Inspection on Connection
- Hydraulic Pressure Testing

## 5. Drill pipe and BHA inspection services

Drill pipe and Bottom Hole Assembly (BHA) inspections are carried out as per the latest editions of API and DS-1 (category 3 to 5) guidelines.

Drill pipe Inspection services include:

- Visual Inspection
- Thread Gauging
- Magnetic Particle Inspection (upset)
- Dimensional Inspection
- EMI on Body-Tubing
- Black light inspection on connection
- Ultrasonic test on slip and upset area
- Ultrasonic wall thickness
- Hydraulic Pressure Testing

BHA inspections services include:

- Visual Inspections
- Thread Gauging
- Wet and Dry Magnetic Particle Inspection
- Dimensional Inspection
- Ultrasonic test on body
- Function test witnessing

## 6. Lifting gear inspection services

asco can inspect, test, and certify all types of lifting appliances on location. These surveys provide a comprehensive register and database of all hoisting and lifting equipment on a drilling rig and include both fixed and loose lifting gears. All the equipment is inspected to the latest standards of API / BS and manufacturers guidelines wherever applicable.

- Visual Inspection
- Magnetic Particle Inspection
- Dye Penetrant Inspection
- Eddy Current Testing Ultrasonic Testing
- Radiography Test and Radiography Test Interpretation



CNG stations standardization has been qualified by the National Accreditation Center of Iran (NACI) since 2017.

asco's inspectors & experts annually inspect the CNG Stations intend to minimize CNG station risks when used by CNG car owners and fulfilling the needs of safety for Stations Staffs. While reaching safety enhancement, high productivity, and efficiency, considering CNG station features such as the usage of equipment, piping, connection, and instrument with working pressure up to 300 bars, using a variety of explosion-proof equipment with different degrees of protection such as d, e, m, o, p, q & n, risks, reaching the Autoignition temperature in some equipment, and the variety of equipment brands with different Asian, European, and American brands.

Lastly, the inspection result categorizes high risk, medium risk, and low-risk items by filling the Iran National Standard Organizations checklist and informing CNG station owners. According to the degree of HAZARDS (Low, Medium & High) items determined in this

checklist, the owners have time to fix the non-conformities based on the risk level. Station owners are obligated to correct the non-conformities otherwise; the station will shut down according to the standard organization procedures in coordination with the national Iranian gas company (NIGC).

The national standards used in CNG Stations inspections are INSO7829 and INSO12054. Also, CNG Station equipment inspections use standards, such as NEC, IEC, EN, DIN, ISO, API, ASME, ASTM, and other international standards.

A summary of inspection activities is in the following:

- Equipment inspection
- Checking the technical performance of CNG Station's main equipment, including compressors, dryers, gas storage systems, dispensers, electrical panels, Control Panel PLCs, and equipment piping.
- Checking and ensuring healthy parts installation, with a valid certificate and appropriate quality, produced by reputable companies
- Examining the process of periodic and monitoring controls performed by the stationer to service and maintain the equipment
- Inspection of emergency systems & F & G systems of stations
- Station control systems inspection
- Explosion-proof equipment by Hazard Zone Inspections
- Measuring and checking vibration of CNG Compressor
- Monitoring and inspecting station operator certification & maintenance companies credit by NIOC vendor list
- Earthing system and lightning arrestor of station inspections
- Equipment deployment by standards inspections

Inspection & Monitoring of Seamless Cylinder Storage

- Visual inspection of seamless cylinders
- Monitoring testing & inspecting cylinders in an accredited laboratory
- Monitoring NDT of cylinders in an accredited laboratory
- Cylinder valves inspections
- Priority Panel of CNG storage inspections



According to the daily expansion of elevation in the building industry, the use of elevators is an inevitable need considering the importance of safety in the elevators and thus providing comfort to its users. It is important to conduct a perfect inspection and pre-testing of the elevators.

ascos international with inspection scopes extension policy proceeded to set up an elevator inspection department that was accomplished by obtaining the necessary licenses from the Standards Organization, the Accreditation center, and hiring an expert's workforce.

Conducting inspections in the shortest possible time based on the relevant standards and instructions to ensure the inspected products and customers' satisfaction simultaneously, is one of the primary goals of the organization.

#### Scopes of the elevator inspection department:

- Inspection of electrical elevators with different running length and speed.
- Inspection of roomless electrical elevators
- Inspection of gearless electrical elevators
- Inspection of electric elevators with specific engine conditions
- Inspection of panoramic elevators
- Inspection of electric elevators periodically



## 1. Technical inspection, documentation, and grading of Handicraft workshops

### This activity contains assessment of:

- HSE
- Skilled labor force
- Machinery and tools
- Workshops capability
- Activity related documents
- Activity environment (production, store)
- Ergonomics, safety and possible risks to laborers
- Production, sales, wrap, raw material, and supply chain process and offers corrective and preventive measures

## 2. Standardization

- Standardization of Handicraft activities
- Standardization of Handicraft workshops
- Quality control of Handicraft products and assessment of their conformity with standards

## 3. Technical inspection & Q.C. of Handicraft products

- Assessment of Raw Materials
- Assessment of final products

## 4. Technical inspection & quality control of Handicraft product wrapping and freighting

- Assessment of wrapping according to product type
- Assessment of loading, freight, and discharge of handicraft products.

## 5. Authentication of Products

- Possibility to trace products and their specifications
- Identification and assessment of producers to support them and organizing of facility allocations
- Possibility to create originality mark
- Accreditation and reliability of products
- Clarifying the quality grade of products
- Protecting the intellectual property of the product
- Clarifying the real production and sales rates
- Possibility to detect the original Persian products
- Simplification of Handicraft products' export affairs
- Creation of product ID (product specification details)
- Simplification of exterior and interior exhibition affairs
- Clarifying the sale price of products and the possibility of market price control
- Encouraging the producers from receiving the license of Handicraft

organization license

- Encouraging people to use licensed products
- Retraining the ancient culture of Handicraft during the inquiry

## 6. Plaque Attachment to Handicraft Instruments

- Creating the Handicraft instruments IS (instruments specification details)
- Decrease in need to visit the workshops
- Organizing the budget and making it targeted
- Possibility to confirm the originality of products
- Identification of active producers and introducing them for insurance coverage
- Separating of producers (craftsmen) from sellers and distributors
- Possibility to check out the production rate of each producer monthly and annually
- Encouraging the producers from receiving the license of Handicraft organization license
- Simplification of exterior and interior exhibition affairs for instrument users that have plaques
- Decrease in the need for craftsman's presence in Handicraft organization

## 7. Handicrafts product's design, color, pattern, & form survey

- Identification of native Handicraft of each region
- Recovery and revive forgotten patterns and designs
- Creation of designs and patterns ID (designs and patterns history and details)
- Identification of appellation and concepts of each pattern
- Photography of motifs and patterns and analyzing their changes
- Possibility of using collected motifs and patterns in other crafts and arts
- Revitalizing cultural messages, identities, characteristics, beliefs, ethnic and myths
- Maintaining the boundaries of craftsmanship and preventing the clumsily and unwanted integration of these trends
- Diversify the common designs, colors, patterns, and forms of each province by current tastes
- Identifying and collecting information such as types of patterns and designs of the region, the category, the name and application of them
- Identify and collect information such as the name of the motifs, the local name, the origin, the meaning of the pattern, and the reason for the motifs used in the work



## 1. Property Insurance

### 1.1. Engineering insurance

- Technical inspection and risk assessment of industrial complex same as petrochemical, refinery, dam, various commodity, machinery, etc. to clarify the current condition of interest
- Periodic inspections to detect and prevent possible damages
- Risk-based inspection (RBI) to examine the subject of insurance in detail
- Inspecting and certifying elevators, escalators, lifters, cranes, etc. and calculate the risk assessment of them
- Investigating the causes and reasons for losses as an insurance expert appointed by the insurer
- Performing non-destructive tests (NDT) and assessing the status of the insured
- Price verification of the insured



### 1.2 Marine, Vessel, ship, and transportation insurance

- Inspection of vessels, ships, etc. to assess the current condition of insured
- Ability to inspect goods in all customs and ports around the world
- Inspecting and certifying goods at origin and surveillance of loading and unloading them
- Inspection and estimation of the lightweight of vessels, ships, etc.
- Draft survey of the insured
- Surveillance the packing, loading, shipment, unloading, and warehousing of specific goods by international standards and guidelines
- Investigating the causes and reasons for losses (including food corruption) as an insurance expert appointed by the insurer
- Inspection of freight forwarders' and carriers' performance
- Price verification of the insured



## 2. Liability insurance

- Inspection of products for product liability insurance
- Periodic inspection of raw materials, products, machinery, and manufacturing process to check continuity of product quality to extend product liability insurance
- Investment insurance to cover risk capital

ascos international, using the experience of his expert team and consultants and experienced engineers, is proud to provide the following standards consulting services:

- ISO 9001: 2015 - Quality Management System
- ISO14001: 2015 – Environmental Management System
- ISO 45001 :2018 – Occupational Health and Safety Management
- ISO 37001 – Anti-Bribery Management System
- ISO 22000: Food safety management
- ISO 27001: Information Security Management
- ISO 13485: Medical Devices
- ISO/TS 29001: Petroleum, Petrochemical and Natural Gas Industries Sector-specific Quality Management System
- HSE-MS: Health Safety and Environment Management System
- ISO/IES 17025: Testing and Calibration Laboratories
- ISO 10015: Guidelines for competence management and people development
- ISO 10002: Quality management – Customer Satisfaction Guidelines for complaints handling in organizations
- ISO 10004: Quality Management – Customer Satisfaction – Guidelines for monitoring and measuring
- EFQM: Improve the performance of organizations and their ability to manage change and transformation.
- IATF 16949:2016 Automotive Quality Management
- ISO/IES 17020: 2012 – Conformity Assessment –Requirements for the Operation of Various Types of Bodies Performing Inspection
- ISO 50001: Energy Management
- ISO 15189: Medical Laboratories – Requirements for Quality and Competence





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