The Importer's Guide:
PRODUCT QUALITY CONTROL

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What's Inside

Introduction

The importance of quality control in manufacturing cannot be emphasized enough. It can deliver the promise of a design innovation, or break it. It can spell the difference between the success and the failure of a product or a business. Ensuring quality, after all, guarantees branding, customer loyalty, repeat orders and new customers.

Companies looking to source quality products or components outside their borders cannot depend entirely on air, road or sea deployment to bring them to market. They have to be involved in the production process in some way, either directly or through other channels, and be able to conduct quality control inspection. This is to make sure every item shipped is based on the same high standard with no defect or other quality issues.

About this Book

The Importer's Guide: Product Quality Control is a walk-through of the inspection process and discusses the steps and options available to companies sourcing products overseas.
It covers the types of quality inspections and their requirements, a sample checklist, and industry- and country-specific standards on materials, products and manufacturing. The book also shares tips on how to resolve post-shipment disputes.

The Importer's Guide:
Product Quality Control

Asia remains the world's leading source of products. Asian economies are still among the top merchandise exporters of the world: China remains the world's no. 1, with exports estimated at US$2.16 trillion in 2020. Japan is fourth with US$683 billion, South Korea fifth with US$577.4 billion and Hong Kong ninth with US$496.9 billion. Singapore, Taiwan, India, Thailand, Vietnam and Malaysia are also in the top 30 world exporters list.

Asia is seen to be cornering more and more of the world's GDP. The IMF projects "emerging and developing" Asian economies to grow by 8 percent in 2021, a faster pace than the 3.9 percent it sees for advanced economies like the US, Germany and Japan.

Exemplars of Asia's growth are Bangladesh, whose textile manufacturing industry is a key growth driver, and Vietnam, whose exports the IMF sees soaring by 15 percent to US$300 billion in 2021.

Asia's growth is also partly due to the transfer of some of China's processing activities in value chains to some of its Asian neighbors, notably Vietnam and Myanmar. In the case of Vietnam, the influx of foreign investment by leading makers of electronic goods, for example,

has enabled the country to specialize in assembly of parts, components and finished goods. In 2019, Vietnam was the third-largest exporter of mobile phones after China and Hong Kong.

Buyers of Asia's exports – importers – fall into two categories: those that manufacture their own products from materials or components from Asia and those that source finished goods to sell as-is to end-consumers or to which they will add value and later offer for sale with some service added.

Since they are based outside the product's places of origin, a key concern of importers, be they large of small enterprises, is how to ensure the quality of the goods they purchase.

Importers who want to be assured of the quality of the goods they are sourcing must invest in pre-shipment inspections. There are several options.

> *"Asia remains the world's leading source of products. Asian economies are still among the top merchandise exporters of the world."*

OPTIONS FOR PRE-SHIPMENT INSPECTION

Importer does the inspection themselves

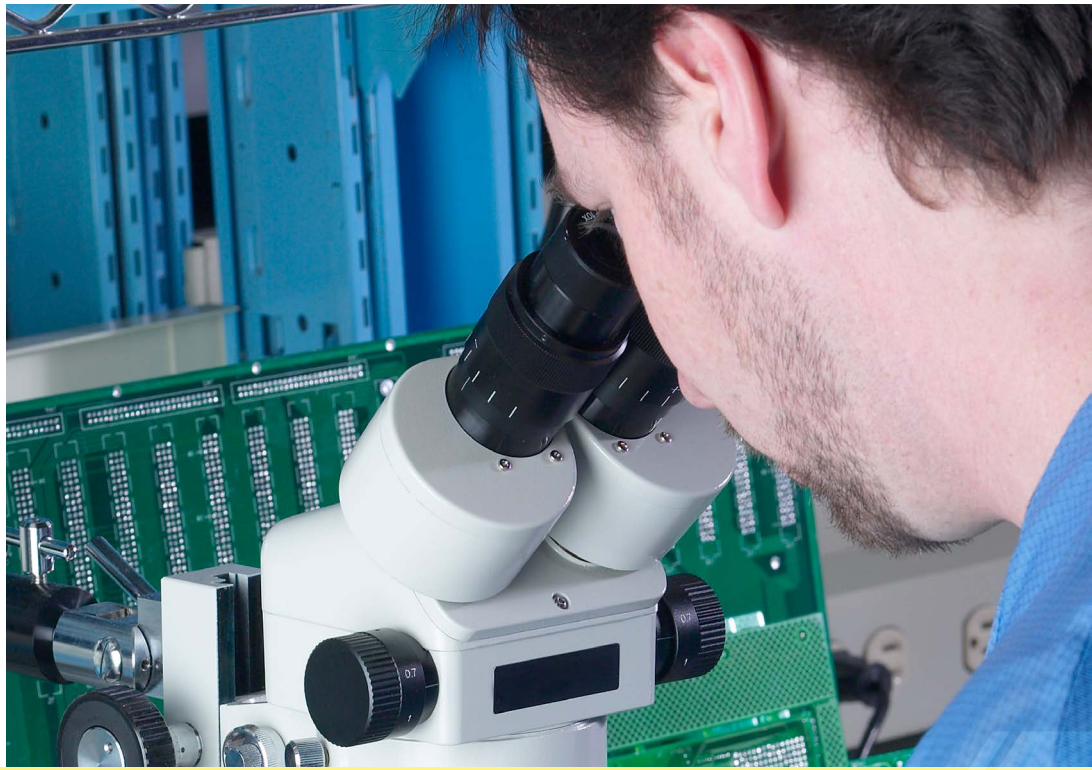
This can be done by visiting the supplier's factory abroad and conducting the checks themselves. This may be a good choice, particularly for importers who have deep knowledge of the product and its manufacturing process, and have the relevant experience in quality control.

A variation of this option would be for the importer to hire a QC professional, most likely based in the country of origin, to do the inspection for them, following the importer's quality standards. This could prove to be a most cost-effective option since the importer would not have to spend on travel costs associated with a factory visit, but would only need to wait for the inspector's report.

Importer relies on their supplier factory's quality control team

This is a good option for importers who have built a relationship with a supplier who has managed to consistently produce goods that meet the importer's standards. This is because the main risk of this option has to do with the supplier's integrity and reliability. While QC staff may report product defects, their management's desire to ship quickly to realize revenue could override the need to rework or establish corrective actions to ensure product quality.

Thus, this option may also be ideal for importers and suppliers who have established rapport. Clear QC guidelines and checklists plus the submission and approval of samples – particularly those known as "golden samples" or those against which mass-produced units can be compared – can make this option work. Importers whose products are on the low end or whose consumers do not expect high quality may prefer this route.

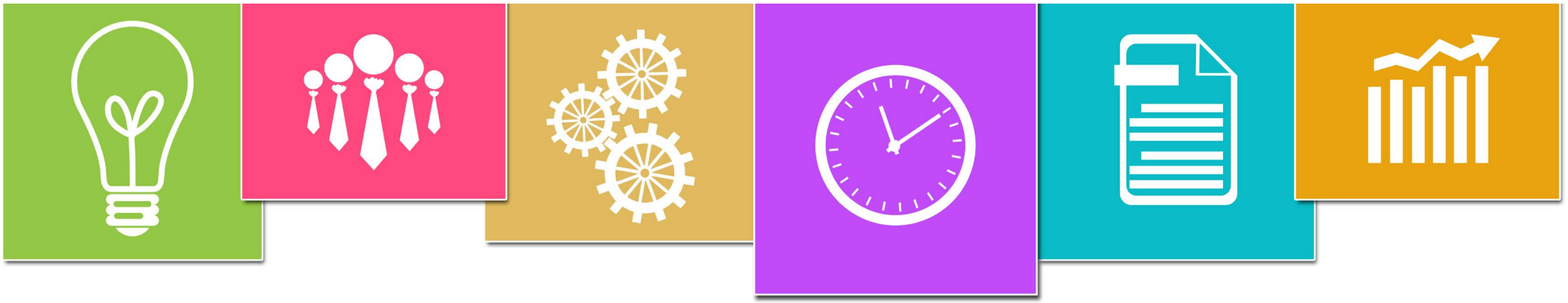


Third-party inspection (TPI)

These are inspections done by professional organizations that are usually certified as compliant with ISO 9001 standards. For products from China, TPIs must be done by organizations licensed to do so by the General Administration of Quality Supervision, Inspection, and Quarantine of the People's Republic of China (AQSIQ). Inspections done by these licensed agencies seek to reassure the buyer that the goods being sourced comply with quality standards. In addition, TPIs check whether the manufacturing process is compliant with international standards on quality management (ISO 9001), socially acceptable practices (SA 8000) and environmental management (ISO 14000).

The main advantage of the TPI option is that the buyer is assured of a fact-based and bias-free inspection, as compared with the first two options that may show some partiality for the interests of either the supplier or the buyer. TPIs, however, may be more costly compared with the first two options. Nonetheless, this may be a cost-effective option for importers who are working with new suppliers, have recurring quality issues with existing suppliers, or are looking to source high-end products. For these scenarios, the investment in TPI could be well worth it.

Notable third-party inspectors include SGS (Switzerland), Bureau



QUALITY MANAGEMENT

Veritas (France), Intertek (UK), DEKRA (Germany), and TÜV SUD (Germany).

While three options have been listed here, some quarters in the QC sector believe that there are really only two options for inspection. These are: "first-party" inspections, which are performed by the suppliers or manufacturers on their own through their QC staff; and "second-party" inspections, which are performed by the buyers or importers themselves – either through their own QC staff or through external professionals or licensed organizations they have commissioned.

> *"TPIs check whether the manufacturing process is compliant with international standards on quality management (ISO 9001), socially acceptable practices (SA 8000) and environmental management (ISO 14000)."*

AT WHAT STAGE OF PRODUCTION TO DO INSPECTION

When to do a product inspection depends on how much risk the buyer can accept from its supplier's products. If the buyer is purchasing components for products that it is subsequently manufacturing itself, then the buyer needs to calculate the risks to its own production when deciding when to do the inspection.

However, catching errors early and fixing them as a soon as possible is a key principle in quality management. Following this, it seems that the earlier an inspection is done to check on product quality is preferable. Defects or errors caught late will cost more.

Quality managers go by the so-called 1:10:100 ratio of development: production: delivery. This means that 1 error will cost 10x more to fix in production than in development and will cost 100x more to fix after delivery than it would if it were fixed in development. Thus, the answer to the question when to inspect seems to be the earlier, the better.

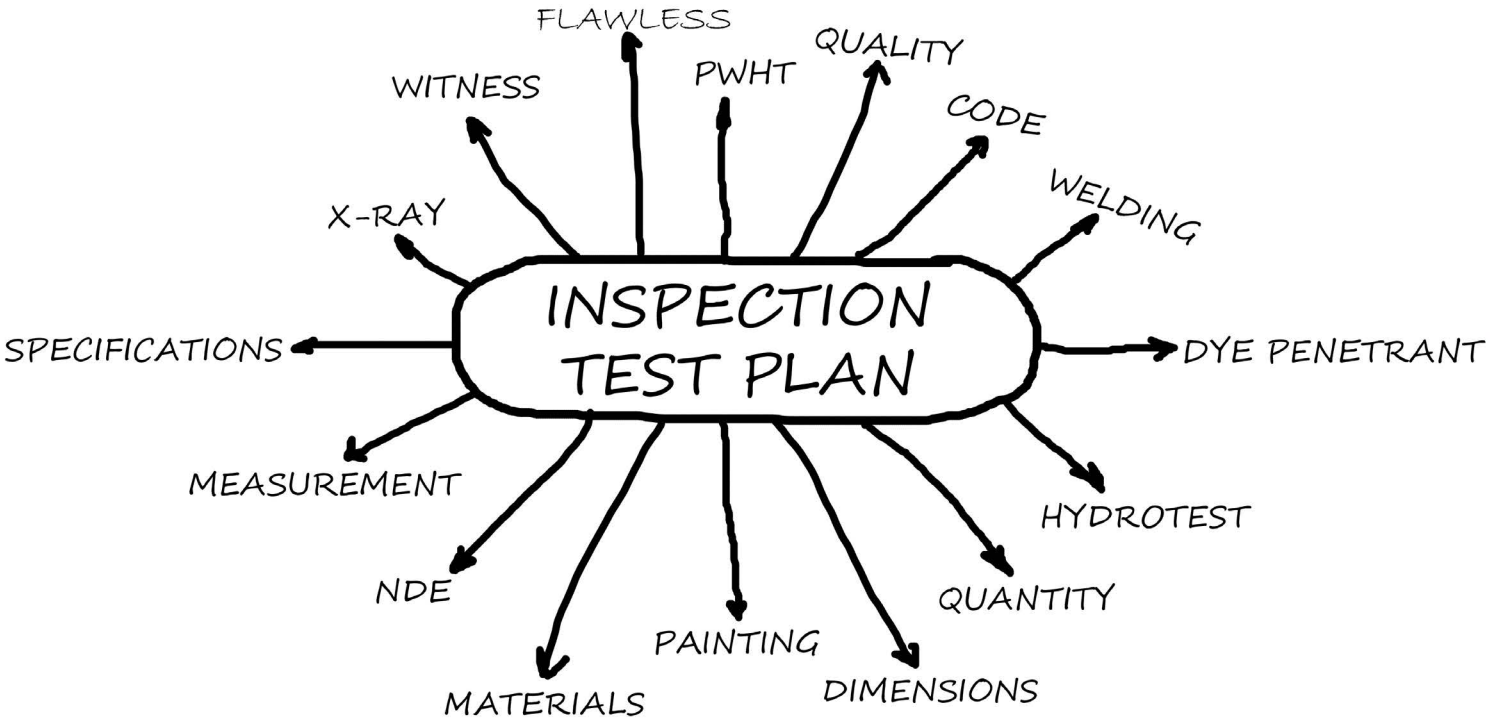
There are several types of quality inspections and these reflect stages of production.

Pre-production inspection (PPI)

At PPI, or initial product inspection, components of the goods to be manufactured are checked to ensure that there are no substandard materials. This is in line with the quality management principle of "garbage in, garbage out" (GIGO) which means that one cannot expect a good product to come out of bad components. Checking components upon delivery decreases quality risks in the finished products. This is especially useful for complex products or those that require subassembly. Other activities that may be done during PPI are validation of a product prototype and a manufacturing process check.

PPI offers a number of benefits, including:

- ✔ the supplier will start as scheduled, lessening the chances of production being delayed
- ✔ the buyer can check that components are not substandard (e.g., the wrong chip in electronics goods) or harmful to buyers (e.g., toxic paints or materials in toys)
- ✔ lessens the chances that a supplier will lower costs at the expense of quality (e.g., by slightly modifying patterns or blueprints sent by the buyers to save on materials or time, such as in furniture or apparel).



During production inspection (DUPRO)

Also known as in-line inspection or in-process inspection, a DUPRO provides buyers with an understanding of the average quality of products at the early stages of production. The goal is to be able to spot defects among the first products off the lines and make immediate corrective actions before the entire batch is finished.

Inspection at the end of production carries the risk that the products are defective. If this is the case, the supplier/factory risks financial losses from having to do a rework (which also means time lost); if the products cannot be repaired, new components would have to be reordered or reproduced; the factory may refuse to rework citing ambiguity in product specifications previously agreed and that based on its understanding, it has produced the items correctly.

Among the benefits of a DUPRO are:

- ✔ if there are defects spotted in the first products off the lines, the products could still be reworked instead of being disposed of; corrections of the defect can be made for the rest of the batch
- ✔ buyers can plan ahead and avoid delays because repairs and reinspection take more time when the entire batch is done.

In addition, a DUPRO also enables the buyer to evaluate if the shipment schedule will be met, based on the number of finished products already available. And in the case of buyers in other countries, an in-process inspection will enable the buyer to know where the goods are actually being produced, becoming aware of any subcontractors, if there are any.

A DUPRO can be done when 30 percent of the products are completed, but QC practitioners recommend doing it within the shortest possible time after the first products come offline.

Another inspection can be done before the start of product packing. This is an opportunity to check the product labeling as well as whether the packing method conforms to the agreed standard.

Pre-shipment inspection (PSI)

Also known as a Final Random Inspection (FRI) or final random check, PSI is regarded as the most popular QC inspection for importers. It usually takes place in the factory when 100 percent of the products come offline, and 80 percent have been packed or ready for shipment.

At PSI, the quality inspector usually checks up to 20 percent of the products for conformity to the quality criteria agreed upon by the importer/buyer and the supplier.

Typical criteria are: product quantity, workmanship, function, safety aspect, size, labeling, packing, etc. Each of these criteria would have quality indicators that will be the basis of a "passed" or "failed" rating. The inspector can conduct applicable tests on the product.

PSIs are recommended to be done at least two days before the products leave the factory (ex-factory date) which is in turn between one and five days before the shipment date.

PSI is the only one among the three types of quality inspections that allows a representative sample to be drawn and inspected, since all the products in a batch are finished, can be counted and chosen in a truly random manner. This gives PSI results more reliability.

Quality inspectors generally use the sampling and inspection method that conforms to international standards such as ISO 2859 and ANSI ASQ Z1.4. This determines how many units of a product in a batch are to be randomly inspected based on product specifications and an acceptable quality tolerance level agreed upon. Based on the inspection results of the randomly selected units, a buyer can decide whether or not to accept the entire batch.

Buyers should note, however, that inspection results are not 100 percent reliable or that a final inspection is an overall guarantee of quality and quantity. Firstly, there's the human factor. An inspector may make an error of judgment using the quality checklist. There may also be the risk of bribery by a dishonest supplier. Also, a few things can happen after inspection. During shipment, an unscrupulous supplier may ship a lesser quantity or substitute some contents. A solution could be to have the loading of goods supervised.

PSI should be complemented with a DUPRO to avoid "last-minute disasters." A key benefit for the importer is that it is able to confirm the quality of the products it is buying before it pays the balance owed to the supplier. Any corrective actions that can still be reasonably done can be done; if not, terms of payment agreed upon could be renegotiated.

Container Loading Inspection

Though no longer strictly part of production, buyers may also opt for this type of inspection. This is done at the factory as the packed products are being loaded into shipping containers. The focus is on quantity and packaging. The inspector checks compliance with quality standards of the interior and exterior packaging and seal; ensures that the right loading plan is being followed (e.g., fragile cartons should not be placed at the bottom of the container; or some products may require nonconventional loading); confirms that the right products in the right quantity are being loaded.

> *"This is done at the factory as the packed products are being loaded into shipping containers. The focus is on quantity and packaging."*

WHAT TO CHECK
Product quality requirements & specifications

Importers must develop expertise in the products they intend to source as each product line has quality standards not only for the product itself but for its manufacturing process. It is the importer's responsibility to define the specific requirements for products or services being sourced, as well as the quality standards to be used. So, finding a supplier who will accept these product specifications and quality standards is crucial for an importer.

Conformity to these product specifications and quality standards will be done by the quality inspector chosen by the importer if the importer or buyer cannot or choose not to do it themselves.

In performing product inspections, a quality inspector will be guided by a quality checklist that has been mutually agreed to by the manufacturer/supplier and the importer/buyer.

A product inspection report will note where a product "passed" (met conformity specifications) or "failed" (did not meet conformity specifications).

Ideally, the quality standards that the supplier and buyer have agreed to will specify the acceptable quality tolerance level, since it is not realistic to expect perfection in manufacturing. Thus, not all of the goods may meet all of the conformity specifications at inspection, but an entire batch of finished goods need not be rejected or disposed of because of these defects. An importer will be guided on whether to accept or reject based on the kinds of defects noted, how severe they are (critical, major, minor) and the AQL that had been agreed upon for each type of defect.

Every product line has its own specifics, but the checklist will typically have the following general headings of conformity specifications:

- ✔ Materials and components
- ✔ Workmanship
- ✔ Appearance

WHAT TO WATCH OUT FOR
Product defects, safety regulations, ethical & social requirements

Having suppliers with a "quality mindset" and a Quality Management System in place takes a huge burden off importers or buyers -- they can rest assured that their orders will arrive at the destination at the agreed quality level and quantity. Nonetheless, besides product defects and safety regulations, it would be wise for importers or buyers to be aware of the ethical and social responsibility standards that they must comply with as well.

At the level of products, importers must not miss checking the following before shipment:

- ✔ Have restricted chemicals or materials been used? Examples are chemicals like cadmium, lead, arsenic, and certain phthalates that may be in paints and materials used for children's toys. If so, laboratory tests may be needed to ensure that the amounts of these chemicals do not exceed allowed levels or are not present at all, to ensure end-users' health and safety.

  Importers of toys to the EU, for example, need to have their goods checked for compliance with Toy Safety Directive 2009/48/EC and the EN 71 toy safety testing standard.

- ✔ Are there any visible defects on the products or their packaging?

- ✔ Have the products passed applicable function and safety tests? This is crucial for products like consumer electronics and medical devices, to avoid product liability incidents and serious harm to end-users.

  There are international agreements on product standards and safety, such as those under the World Trade Organization's General Agreement on Tariffs and Trade (GATT), as well as those under the International Organization for Standardization (ISO). An example is the standard for medical devices, ISO 13485:2016.

  Every country also has product safety standards that importers need to be aware of. In the US, for example, the Food and Drug Administration (FDA) regulates the importation of certain medical devices (e.g., pacemakers) and radiation-emitting electronic devices (e.g., laser pointers, laser toys, LEDs, microwave ovens, televisions).

  Importers of electronic radiation-emitting devices must ensure that their products comply with the Federal Food Drug and Cosmetic Act (FFDCA), Chapter V Subchapter C (Electronic Product Radiation Control). Manufacturers of TVs and video display products must comply with Title 21 Code of Federal Regulations, Subchapter J, Radiological Health.

Importers of FDA-regulated products are responsible for ensuring that their products comply with all FDA laws and regulations. Products that do not comply will be refused admission into the US at the time of importation.

- ✔ Have the products been labeled correctly? This refers not just to any brand or trade names but also to product contents, transport style, quantity, place of origin and destination of products.

- ✔ Is the correct quantity being shipped? Wrong quantities result in business losses in terms of time delays as well as credibility.

In terms of ethics and social responsibility, importers and suppliers would do well to conduct their business within the framework of accepted international standards, including:

ISO 9000

A supplier whose Quality Management System is certified as compliant with the ISO 9000 family of standards (including ISO 9001) means that it has met the requirements to ensure that products or services it provides meets the buyer's needs or expectations and follows applicable regulations. It provides some assurance to the importer or buyer that the supplier's management is committed to quality as reflected in: available resources, employee competence, process management, corrective actions taken and customer complaint handling.

ISO 26000

This standard provides guidance on how businesses and organizations can operate in a socially responsible way. This means acting in an ethical manner that contributes to the health of the environment.

ISO 45001

This standard provides guidance on occupational health and safety, in response to data showing nearly 6,300 deaths daily worldwide due to work-related causes.

SA 8000

A set of standards for work conditions referencing principles from the Universal Declaration of Human Rights, International Labor Organization, and national laws. SA 8000 addresses concerns on child labor, forced labor, the right to collective bargaining, working hours and pay.

Countries mindful of these standards have taken action on imports allegedly manufactured with forced labor. For example, the US Customs and Border Patrol (CBP) recently issued Withhold Release Orders (WROs) on products imported from areas in China where forced labor is believed to have been used in the manufacturing process. Among the imports were apparel and computer parts. Having WROs attached to an importer's shipment means that even if the products have reached their destination port, the products will not be released by Customs authorities.

Importers and suppliers who understand and are committed to these standards such that their business practices follow these standards are already in a good place, even if they do not have a certification document to show for it.

TIPS FOR POST-SHIPMENT DISPUTE RESOLUTION

If for some reason the products or services from a supplier do not meet the buyer or importer's expectations or specifications previously agreed upon, the first step is for the buyer to take this up with the supplier.

If the supplier has a QMS that meets ISO requirements, it is required to specify channels of communication in case of customer complaints. Buyers can escalate complaints through these channels. If the buyer is still unsatisfied with the response, the next escalation point is the organization that certified the supplier's QMS as being ISO 9000-compliant. The name and details of the certifying organization should be stated on the supplier's certificate. This organization is responsible for investigating the buyer's complaint.

Should the buyer still be unsatisfied with the certifying organization's efforts, the next step is to approach the accrediting body, whose details should likewise be found on the supplier's certificate. The accrediting body is responsible for examining the actions taken by the certifying organization. If the accrediting body's response is still unsatisfactory, the buyer may then take the issue to the International Accreditation Forum of which the accrediting body should be a member.

If all else fails, the final escalation point may be to take the supplier to court, the rules and processes of which vary from country to country.

All this unpleasantness, however, may be avoided with careful groundwork.

Buyers can protect themselves by:

- ✔ having a substantial understanding of their product and market
- ✔ defining the specifications of the product they want to import or buy
- ✔ establishing clear quality criteria and checklists that will be used to evaluate the products during different stages of inspection
- ✔ clarifying all requirements and leveling expectations with the supplier through a contract
- ✔ knowing the regulations that may apply to the product or service being purchased
- ✔ and finally, knowing the laws of international trade in places where they are doing business.

These steps will help ensure a positive experience.

About Global Sources

Global Sources is a trusted, internationally recognized B2B sourcing platform that has been driving global trade for more than 50 years. The company connects authentic buyers and verified suppliers worldwide with tailored solutions and trusted market intelligence through trade shows, digital platforms and magazines.

Vision

To be the most trusted, customer-centric, multi-channel B2B trade platform that promotes authentic global trade geared towards enhancing the quality of human lives

Mission

Connect authentic buyers and suppliers worldwide with tailored sourcing solutions and actionable market intelligence. Help them meet the rapidly changing dynamics of the global trade, source more effectively and seize new opportunities

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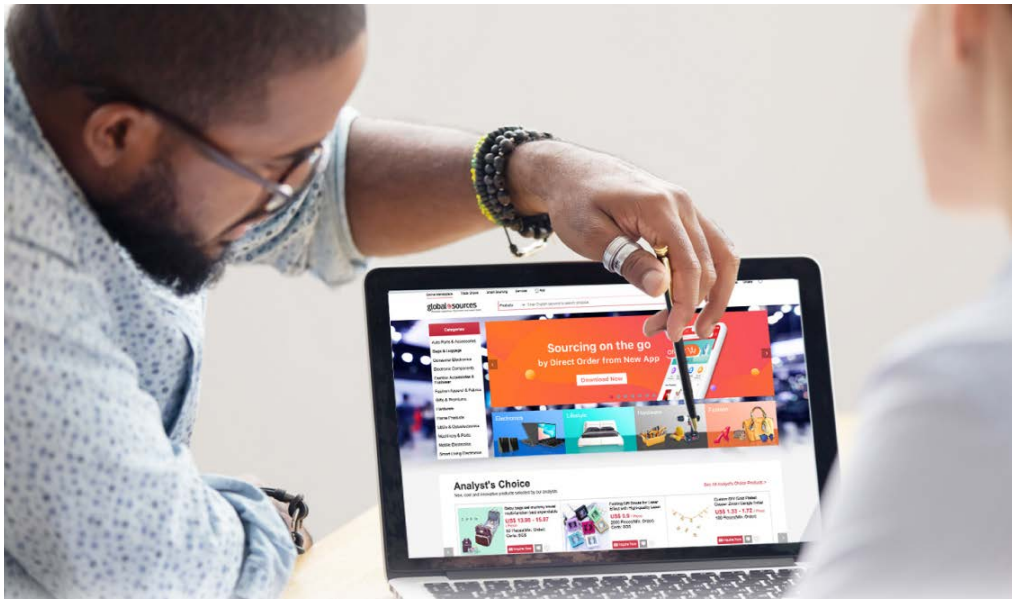

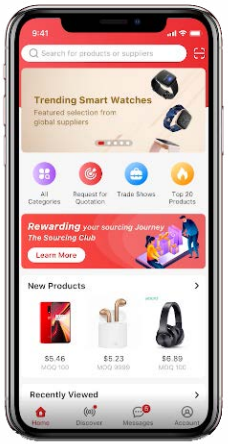

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