



FERGUSON
INDUSTRIAL

**QUALITY IS MORE
THAN A CHECKED BOX:**

Ask Your Supplier The Right Questions

ABSTRACT

Whenever industrial companies search for a Pipe, Valve and Fittings (PVF) supplier, they often don't ask enough questions about a prospective supplier's quality program. Sometimes they merely ask a single question: "Do you have a quality program?" with a box to check, yes or no.

Quality, however, is more than just a checked box. Quality is about safety, reliability, repeatability and profitability. Quality is vital to your company's bottom line.

The consequences of product failure in your industrial plant can be catastrophic, and rework because of a failed product wastes manpower, time and money. Selecting a low-price supplier without a robust quality program could be an expensive choice. Industrial operations require predictability and minimal disruption to the work process, which, in turn, depend on products that perform reliably. Many factors can negatively impact product quality, so you must be diligent in vetting potential suppliers to find out if they are worthy of becoming your long-term partners.

You should confirm your suppliers operate a comprehensive quality assurance program that is dedicated to supplying products that meet manufacturing specifications. They should maintain redundancies in supply and logistics, monitor their own suppliers through meticulous product testing and rigorously maintain a comprehensive Approved Manufacturers List (AML). Quality should be driven from the top down, existing as part of the overarching company culture.

To find the right supplier, you must ask them to do more than check a simple box. You have to dig deeper and ask the right questions—tough questions—that demonstrate a supplier not only deserves your trust, but can deliver what you deserve most: Peace of mind.

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BACKGROUND



COST DOES NOT EQUAL PRICE

When an industrial company wants to select a Pipe, Valve and Fittings (PVF) MRO partner, their supply chain professionals usually send a potential supplier a Request for Proposal or Quote (RFP/Q). This typically includes a request for information or questionnaire that attempts to ascertain the supplier's qualifications—questions about the size of the company, years in business, service capacity and other relevant capabilities.

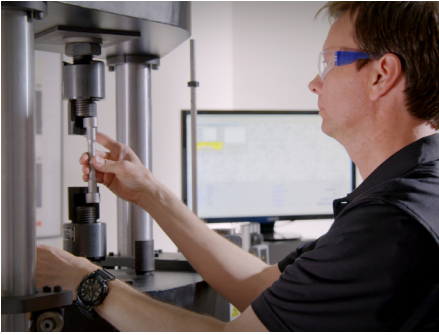
Somewhere in there might be a query about quality. Unfortunately, it can be as simple as a single question along the lines of “Do you have a quality program, yes or no?”—a simple checked box. Honestly, how often do your

suppliers answer “No” to that question? Even if their quality program consists of one person with a caliper, they can check the “Yes” box.

If you want to be sure you have the best partner as your supplier, it starts with verification of the supplier's quality program. The RFP/Q process is long and costly, requiring many resources. When going through the process to find the best supplier, you need to do whatever you can to validate a supplier's quality processes and understand the value of the products and transactions you might receive from a supplier.

What is quality? Do you know it when you see it? Quality may be hard to define, but one thing is certain: Quality is more than just a checked box. It's not vague or

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insubstantial—it's reality. It's about meeting expectations. It's about not wasting your time. Above all, it's about safety, repeatability, minimal disruption to work processes and your bottom line.

What happens if a part at your site fails catastrophically, or your plant experiences an unintentional release of toxic chemicals, or even if you just have to decommission a part prematurely? Today, industries live in a highly regulated world. What's the true cost to your company if there's an incident, an injury, or if OSHA, CSB or investigators come knocking at your door?

Cost does not equal price. Total Cost of Ownership (TCO) also includes the consequences of a product not performing as it should, including the costs related to safety and lost time. If there is an event, the actual cost of a \$40 part might be \$40 million. How closely do you look at your suppliers, and how often? What might you save—or lose—by not looking deeply enough into your supplier's quality program? Quality has an enormous impact on TCO and your Return On Investment (ROI).

As a procurement officer, engineer or Engineering-Procurement-Construction (EPC) contractor vetting a supplier, you need to look harder. A partner without a robust quality program might look good on paper because of price, but selecting them may actually be your most expensive option. Ask yourself, "What am I missing? What are the risks to my organization?". Asking the right questions will make your job easier and will help protect

the lives of the people working in or near your facility.

WHY QUALITY MATTERS

Predictability and Planning

Everyone wants things to go as planned, but planning and running your operations require predictability to be safe, reliable, profitable and sustainable. Processes must be repeatable. Your bottom line depends on the safe performance and service reliability of the products used in your operations. Predictability is crucial to your planning, because it allows safe operation, saves you time and money and promotes sustainable profitability.

You can't have predictability without good quality processes, products that conform to specifications, and minimal disruption to process. That's why quality matters. Quality is defined by meeting specified requirements and attributes. It's the foundation of stability for available inventory, predictable logistics and on-time delivery. Put simply: Quality promotes everyday safety and performance.

Your safe, reliable, predictable and profitable operation depends on the timely availability of products that conform to specified requirements. Product reliability promotes worker and community safety, good life cycle management, profitability and retention of working capital. Products need to be delivered on time and in usable condition. Who has not felt the repercussions of a delayed shipment or a part that was mishandled? How many of

these events could have been prevented by paying a little more attention to detail?

Quality, or the lack thereof, impacts all your transactions and the safety of your plants and communities. It allows you to quantify performance. It is far easier to focus management's attention when you can express your concerns and goals in common terms of safety, loss prevention, profitability and maximization of time and cost savings. Quality must be viewed as comprehensive for your entire operation, the energy that drives all the gears. Quality should be considered holistically as a primary driver of TCO and the lifecycle management of a product. Simply put, increasing the product's lifecycle decreases your TCO and increases your ROI.

Rework Costs and Wasted Time

Quality is about time and money. Many customers are unaware of the TCO of a particular product, especially when you factor in the cost of rework and the time it wastes. Rework costs may be many multiples of the original cost of the product—not to mention the potential cost to injured workers, their families and the community.

If you ever find yourself thinking, “Maybe the dollar I saved on that product that didn't work should have been spent on a product that did”, then congratulations—you've come around to the right way of thinking. It's also likely you're thinking about ways you can improve your company's procurement processes. The old adage “an ounce of prevention

is worth a pound of cure” applies here. Rework costs are dead expenses and greater than normal transactional costs. Time can't be reclaimed or stretched—it's far more critical than many of the fluctuating variables of the supply chain. Rework wastes manpower, profits and efficiency, and the disruption to your work processes are enormously costly. Underperforming, nonconforming and defective products cause untold safety and reliability problems, costing U.S. industries hundreds of billions of dollars every year. The right supplier, however, values your time, helps you not to waste money, provides quality products and processes that prevent disruptions, and minimizes negative impacts to availability, pricing and service.

Assessing and Monitoring Quality

Surveillance and verification of suppliers and products is critical. Quality can and should be continuously monitored and assessed through formal and robust processes. Suppliers should assume this burden for you and verify that their own suppliers are legitimate and worthy of trust. They should conduct formal assessments of their suppliers' products and performance. Diligent, competent practices should be evident, including processes and records for product evaluation that are generated by testing laboratories, inspectors, auditors, data analysts, and similar professionals.

When these processes are performed regularly by unbiased, well-trained and well-equipped personnel, many problems,

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poor manufacturers and nonconforming products can be ferreted out before they cause an incident, and suppliers should be able to review with their customer the quality data they compile for a supplier or product. A good supplier uses its processes to partner with its customer, because the data they compile might save a life or the health of a business, including yours. If something does go wrong, quality data is critical in determining not only how something went wrong, but what the best response is to fix the issue and make it right with the customer.

You should also examine a supplier's accreditation. Certifications such as ISO 9001 and ISO/IEC 17025, when implemented correctly, create repeatability and continuous improvement through a cultural balance that makes operations leaner and improves processes. This in turn drives safety, performance, reliability and cost savings. Effectively executed, management systems decrease TCO; ineffectively executed, they drain resources and impair service. You should require evidence, and you should ask questions to ascertain whether your supplier has a formal and effective quality management system. Your questions should focus on capturing technical data, performing competent reviews and using supplier evaluation as a driver of continuous improvement in your organization.

PRODUCT QUALITY AND HOW IT CAN GO WRONG

Product Failure

What are the results of a “product failure”? It's always unplanned. It could be a financial cost— the premature replacement of a component, reworking or panic sourcing of new parts. It also could be a catastrophic event that compromises human life, community safety, financial viability of your plant site and your company's reputation. The reality of product failure is that people can be injured or killed, and companies can be destroyed. These are our families, friends and communities—people depending upon your facility's safe and profitable operation. If a plant shuts down these days because of an incident, there's a good chance it could be closed—gone forever. If a site is hanging by a financial thread and expenses are currently greater than profits, a serious incident could be financially catastrophic for the site and the community where it's located.

A “Race to the Bottom”

Manufacturing is based on product specifications and tolerances, and many manufacturers tend to produce towards the minimum required to achieve marketability. Additionally, they're always under pressure from purchasers to lower their prices. When their expenses rise, the vice squeezes tighter. At some point, they'll try to reduce costs because they too wish to make money after all. Competitors sometimes employ

the strategy of taking market share with inferior or less-expensive products. Suppliers also tend to gravitate towards the least expensive way to make a functional product within design limits. As a result, when products that cost less to manufacture start retaking market share, it starts a cycle of competitiveness that results in a “race to the bottom”, which stops—hopefully—within industry-mandated specifications. Regardless, the new product may not perform as well as the previous one. Your net profits could decrease when products you procure are at the lowest limits of conformity. The wear and tear of your services may require less robust products to be replaced more frequently, increasing your TCO.

Loss of business incentivizes manufacturers to join the race, and once subpar products saturate a market, buyers, in turn, lower their expectations. The replacement product becomes the new benchmark. This produces a spiraling effect, hastening the pace of the race to the bottom. Unless it’s reversed by economic stimulus or user requirements—for example, customers demanding a better product and paying more for it—the race to find a new bottom will continue. The longer the race continues, the more likely other suppliers will join.

Other factors may come into play that negatively affect product quality. During the pandemic, some companies have demanded price reductions from their suppliers. If the supplier has a lean margin already, what will the less expensive product or

the service look like? Will the acquisition cost savings be greater than the cost of a reduced life cycle?

Another red flag might be a change in the supplier’s management, often brought on by economic pressure. The new culture may be unknown, and it’s not a novel concept that a new team may enact a changing of the guard, tasked with reducing costs and increasing profitability, carefully gauging what the market will bear with respect to previous and/or expected quality.

Trade and market instability can also impact quality. U.S. trade sanctions have had negative effects on both the availability and quality of goods. When trade barriers chase good manufacturers away, this simply increases the likelihood of suspect or nonconforming products entering the marketplace that purport to meet specifications.

To make things worse, the U.S. has yet to develop the capacity to replace suppliers lost to trade sanctions. We have not significantly increased domestic capacity of industrial commodity goods, and U.S. capacity isn’t readily accommodating of the volume lost to previous shuttering or trade sanctions. Declining manufacturing expertise has also affected product quality and availability. Even if they are available in some cases, the products produced may not offer either superior performance or value-pricing.



Quality is, in fact, driven by people. It's not a country, a flag, a banner or a logo. It's a group of people who want to do the right thing for themselves and their customers.



In the end, one thing is sure: Poor quality eventually will show up, one way or another. Unsuspecting suppliers and customers have received underperforming products because they have panicked or sourced common SKUs, only considering the price point, and a nonconforming or defective product may be impossible to detect until failure occurs—in other words, when it's much too late.

Engineering and Manufacturing Competence

It's not uncommon to find suppliers whose quality personnel don't have adequate time for their duties, or are pulled into other business-related duties, leaving less experienced and less competent staff to manage the technical responsibilities. This can have an adverse effect on product quality and could also cause a compliance issue when product and/or test certificates are issued. During such times, a customer may depend on the supplier to do its own self-auditing. The bias inherent in this process should be self-evident.

On the other hand, suppliers with engineering and manufacturing competence reflect a skilled and experienced staff and competent processes. Their processes, certifications and accreditations speak to their cultural and managerial commitments, repeatability and predictability. Quality is ingrained in their culture; their people own the processes, and they understand the spirit of what you, the customer, are trying to do with your business and what it takes to help keep you safely and

economically operational. Quality is, in fact, driven by people. It's not a country, a flag, a banner or a logo. It's a group of people who want to do the right thing for themselves and their customers. It's a partnership demonstrated through trust and reliability. They want things to go as planned, for both of you. They believe in quality from the top down and have a firm management buy-in to attract and drive talent, individual effort and strong work ethics.

Sub-tier Suppliers

Very few manufacturers make every part for every product they produce. It's an integrated world, and every supplier needs good sub-tier suppliers for equipment, materials, semi-finished parts and finished branded products. But if a manufacturer suddenly is forced to switch suppliers or use a new one, they could see product quality plummet overnight. If an already compressed supply base shrinks even more, the supplier may find itself in a desperate situation—find a new sub-tier supplier or shut down. This can often lead to procurement from less reliable sources. This loss of reliability will eventually flow downstream to the customer. But the right supplier isn't as affected by losing sub-tier suppliers. Why? Because it's prepared: with an already-compiled, robust list of qualified suppliers, it doesn't have to go to the "B-list".

You, the customer, need to know if your supplier is monitoring its A-listers. Unsuspecting suppliers and customers may receive transshipped and/or underperforming products.

It's the responsibility of the supplier to evaluate how any changes to the supply chain might affect quality, because a loss in manufacturing quality may not immediately be detected by a customer.

Is the supplier you're vetting using competent, professional assessors to monitor their sub-tier suppliers? It should, because the quality of the review is affected by how well things are assessed and the competence and experience of the assessor. Risks from circumvention, fraud and transshipment are mitigated by procuring from verified suppliers. In every case, you should always remember the phrase "trust but verify".

TRANSACTIONAL QUALITY–REPEATABILITY AND VALUE

Conforming Products

In the past, suppliers acted a lot like manufacturers' representatives: they brought the products to the market and let the customer pick and choose. Today, suppliers should work for the customer to find them the right products—properly manufactured products that meet required specifications. These products have no downside; they enhance repeatability and predictability of processes, decrease TCO and increase ROI.

A good supplier not only supplies you with conforming products, but also has the technical, engineering and monitoring processes to make sure products conform to specs.

Reducing TCO and Increasing ROI

Reducing TCO and increasing ROI go hand-in-hand. They result from incorporating the best values, not necessarily the lowest prices. Decisions based mainly around lowest price can be counterproductive because bad parts compromise safety, and apparent price savings are often negated by increased costs stemming from nonperformance or reduced lifecycle.

The right supplier delivers quality and service, and quotes accordingly. Reducing TCO and increasing ROI require vetting the right balance of reliable suppliers who use effective management processes, advanced logistics and data analysis, and trained, experienced, customer-dedicated people.

Supplier/Product Qualification and Surveillance

Your goal is to find the right supplier, one that's a good fit for your company, and to become long-term partners that support each other. It's neither economically sound, nor does it promote safety and reliability to approve substandard suppliers simply because they're the lowest bidders. That can let you down in costly ways. The probability of an accident or incident will increase, nonconforming products may have to be replaced, and incidents will require your attention, which could include needing to search for a new supplier. All of it increases your TCO and reduces ROI. A good supplier earns the

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By partnering with a trusted automation equipment supplier, oilfield service companies can improve the efficiency and reliability of their water disposal infrastructure while improving safety and reducing costs.



confidence of its customers with meaningful data and convincing demonstrations of service and performance.

It's simple: You're looking for predictable products and processes. You're looking for suppliers that contribute to process improvement and cost savings. You're looking for a partner who is concerned about your company existing and growing, not just whether they can get an order. You want a good partner with effectively executed Quality Management Systems (QMS), another point of inquiry that shouldn't be limited to just a checked box. You need details about those processes, because they drive the predictability you need.

Quality and the Supply Chain Professional

For a variety of reasons, the Supply Chain Professional (SCP) should be deeply involved in verifying their supply partner's QA program and processes. They're often in the best position to "own" quality in their organization. The SCP has the experience, authority and data to make informed decisions, and often has the direct opportunity to intervene where they see a suspect or problematic transaction. The involvement of the SCP ultimately saves a lot of work and promotes strategic goals. Ask yourself, who owns quality in your organization? If it's not you—why not?

Due to budget constraints or turnover, companies may no longer have the resources they once had which were dedicated to vetting suppliers and quality

programs. This puts supply chain people in an awkward situation. They might often be incentivized and evaluated by how many dollars they "save" the company signing up low-cost suppliers. "Cost" is not synonymous with "price". What are the overall costs that result from these practices?

SUPPLIER QUALITY

Logistics and Information

Your supplier should plan for and maintain redundancies in supply and logistics. It has extensive market knowledge because of its experience and intelligence gathering. It keeps up with what's going on. Environmental, political and economic barriers can suddenly remove sub-tier suppliers from the market whose products previously were available, reliable and affordable. A good supplier is aware of how its suppliers are influenced by market forces and plans around potential shortages or interruptions in supply. They should be plugged in to the changing global marketplace and able to share reliable information with you.

The digital era makes it easy to spread information—and disinformation. Rapid dissemination of false information that can't be verified by nonexperts can create false scares. A good supplier makes sure its information is always up-to-date and gathered and examined by experts, and they should be able to verify what you may have heard through the grapevine and help quash false rumors.

Scalability

Does size matter when it comes to quality? To have a robust quality program takes considerable resources. If a prospective supplier's program is not robust enough, it should be a warning sign. The PVF industry is global. Today, a good supplier must have the resources to travel around the world and perform the audits, interviews and investigative work that may be necessary to maintain a vetted, backstopped supply base. Suppliers should be able to show you with whom business is transacted, as well as data to support why you should trust the products being supplied to you.

Whatever their size, your supplier should be able to scale its products and services to its customer's locations and operations. Your supplier should be able to identify multiple reliable resources, monitor the markets for potential disruptions, and minimize the effects on its customers. They should be a market expert that can forecast trends and be responsive rather than merely reactive. They shouldn't simply be along for the ride with you, hanging on and hoping for the best. Additionally, they should be financially healthy. Customers should obtain a Dun & Bradstreet report and any other financial data available on all potential suppliers, and consider using reputable business look-up services that can contribute data about a company's ethics and compliance.

Partnerships

Any dependable supplier wants to establish good partnerships with its customers—long-term relationships based on trust, verified performance and cost savings. In the past, customers might have lined up a long list of suppliers for materials or products, hoping to leverage their negotiating strength to get lower prices. It's expensive, however, for customers to truly maintain hundreds or thousands of suppliers in their vendor file. Besides the hard dollar costs, it's a Herculean—if not impossible—task to maintain a line-of-sight view of the products your plants are receiving. Considering the potential jeopardy from receiving non-conforming products, most customers today see great value in working with a smaller number of suppliers and forming strong, enduring partnerships with them.

This kind of partnership doesn't occur overnight, and success is predicated upon both sides establishing a transparent, open and honest relationship, one of mutual trust with active support from both customer's and supplier's upper management. A good supplier implements effective and timely communication with a customer, good, bad or ugly. When would you prefer to be notified about an issue with a part, before it has been installed or after? Your supplier should work diligently to identify non-conforming products through receipt inspection prior to it getting in your hands.

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A good supplier maintains quality performance data not just for monitoring its suppliers, but also for good customer service.



Data Review and Analysis

Your decisions will only be as good as the picture you can form with the information you have—the more information you have, the clearer the picture.

A good supplier maintains quality performance data not just for monitoring its suppliers, but also for good customer service. They're able to supply meaningful information obtained through robust data analysis and are able to show you documentation and forms that verify their monitoring and auditing of manufacturers and sub-tier suppliers. Your supplier should show it has the accountability and means to identify, track and solve problems.

Vetted Suppliers—Approved Manufacturers List (AML)

Quality begins with a supplier having competent people and processes for assessing its suppliers and products. It's bolstered through effective monitoring of product quality and implementation of corrective actions, which includes the suspensions and disapprovals of supplier-products. It's imperative that a supplier maintains a dynamic AML that demonstrates supplier qualification and monitoring, as well as product diversity that's appropriate for your business needs and scale of operations.

A good supplier's AML, if well-maintained, provides immense benefits to you. By the details it contains and the frequency of its being updated, an AML can show you whether a supplier has developed adequate resources and is maintaining positive business partnerships with them.

An established AML is expensive to maintain, but its importance cannot be overstated. It requires the appropriate resources and its own quality management that must be separate from the supplier's commercial influences.

CONCLUSION

Finding an established supplier with a comprehensive quality program is crucial to any industry. Unplanned disruptions are costly, but quality processes and diligent monitoring of suppliers can prevent many disruptions. In the final analysis, the best value a supplier can provide to a customer is a robust and integrated quality assurance program that promotes a culture of quality from the top down. A good supplier is concerned about safety, decreasing your TCO and improving your ROI and bottom line.

Here are five questions you should ask a supplier, at a minimum:

1. Is your company registered by an internationally recognized registrar to ISO 9001 or another recognized Quality Management System? If so, please include a copy.
2. Does your company have formal policies and procedures to: a) identify qualified suppliers; b) identify suppliers of nonconforming products; c) prohibit purchasing, receipt, and/or sale of disapproved products; d) require corrective actions from suppliers? If so, please include copies.

3. Does your company have documented, controlled procedures and work instructions for the qualification and auditing of its suppliers, as well as for the sampling, inspection and testing of products from those suppliers? If so, please include a copy.
4. Does your company employ competent, dedicated associates who perform the sampling, inspection and testing of supplied products? If so, please provide an organizational chart of your QA Department.
5. Does your company have the capability to validate specified product markings, finish, dimensions and specified material properties (e.g., chemistry, mechanical properties, corrosion resistance)? If so, please list where these processes are performed.

These questions focus on qualifications, technical data, performance metrics, competence, training, traceability, continuous improvement and transparency—factors that can prove that a supplier deserves your trust. Always remember: Trust, but verify.

Remember: the best value is not necessarily the lowest price. TCO and ROI always must be considered. It might be time to rethink another old saying, “There’s good, fast and cheap—you can have two.” Quality is free. It helps reduce your rework costs and TCO, and it promotes safety, reliability and profitability. TCO is based on premium performance. It’s a balance of quality, service and price, reflecting ever-changing needs and conditions. To find this balance you need to find a supplier that offers a superior quality program, who respects its customers, and who delivers on its promises. This allows you to focus on higher value and strategic tasks. Picking the right supplier with a robust QA program allows you to spend more time where you’d prefer, rather than dealing with issues arising out of product nonperformance.

Ask a potential or existing supplier the tough questions. Don’t just ask them to check a box. Dig deeper. Finding the right supplier with whom you can create a lasting relationship—a partnership built on trust—will give you peace of mind.

To learn more about how to find a quality supplier, contact your local Ferguson Industrial associate or go to **fergusonindustrial.com** to learn more about our quality assurance program.

Remember: the best value is not necessarily the lowest price.

