



your pipeline

your pipeline **filtration**
filtration **specialist**
specialist



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We help

protect your most valuable investment

When millions of dollars are tied up in plant and equipment you naturally want to be certain that you are protecting your investment in every possible way. You aim to keep costly down time to an absolute minimum and to prolong the working life of the equipment to the absolute maximum. To succeed, however, you need to ensure that your pipelines are not carrying a hidden menace.

Scale and dirt can cause havoc when they penetrate control valves, turbines or other critical items of plant equipment. Dirt lodging in valve seats will cause leakages; it can cause malfunctions in automatic equipment; and collecting in pipelines it will begin to obstruct flow.

Whether your pipeline is carrying a liquid or a gas, it will usually require cleaning or conditioning and that's where we will help you to protect your precious investment, by providing a filtration or straining pipeline product that will exactly suit your requirements.

The cost effective solutions

Vee Bee has years of worldwide experience in providing cost-effective solutions by filtering out the problems before they happen. Whatever the size of the problem we can take it on.

Our products are either cast or fabricated to meet the highest standards of the world's engineering industries. Our *Cast Y-Type, Mono In-Line and Duplex Strainers* are manufactured in sizes ranging from 1/4" (6mm) to 48" + (1200mm+), and are suitable for pressures up to 6000psig+ (413 BarG). Our fabricated products range in size from 1/4" (6mm) to 78" + (1980mm+) and pressures up to 2500psig+ (172 BarG). Equipment can be designed to stand up to the most corrosive and temperature sensitive applications by sourcing and manufacturing in a wide range of materials.

Meeting you beyond half way

Vee Bee has one of the largest ranges of filtration equipment in the world, but the solutions we can offer you go even further than that. If you have a special problem, we'll go to tremendous lengths to provide a custom built piece of equipment supplied when and where you want it. We believe, and many of our customers would agree, that this *flexibility is our greatest strength. It could well become your greatest asset!*

Faced with a *unique problem* We can *produce a unique solution*

No matter how big the product range, an off-the-shelf solution won't always work and often it's the unique problems, which are the really urgent ones. In these situations, some suppliers say "no", "maybe" or "we will get back to you!" – whilst we will almost always say "yes"; because if it isn't in our range we can engineer it for you.

New concepts will be tested to the highest level possible through *In-House R&D, Inspection, Testing* and if required third party verification. Vee Bee works closely with our foundries, flow test facilities and universities to ensure that not only is our product staying ahead but also the technology that backs it.

To One of the Biggest Ever

When *Sonarco Algeria* needed to protect their wellhead compressors, Vee Bee stepped in with some of the largest cast mono in-line strainers ever produced, where others may well have backed off.

The strainers each weighed in at 3.395 tons (4475kgs). Castings for both body and covers were in carbon steel A216 WCB. The design was based on conditions of 1102psig (76 BarG) at 82°C (168°F), with calculations in accordance with *ASME VIII Division 1 and ANSI B31.3*. Part of the extensive testing necessitated a *Hydrostatic Test to a pressure of 114 BarG (1653psig)*. This test was performed to ensure the integrity and quality of the casting.



Just 28 Days from First Contact to Installation

When a UK Power Station highlighted the urgent need for a *24" cast dual in-line strainer* to filter condensate, Vee Bee were able to deliver – *very quickly indeed*. The unit, weighing 9 tonnes, *was delivered within 28 days of order placement*.

The Strength to Take on all applications.

When a *Major Oil Company* required units for an offshore platform, they contacted Vee Bee. Design requirements were to meet *BS5500 Cat.1*. Vee Bee had the flexibility to offer a more cost effective solution in the form of cast strainers. Vee Bee accepted the order and successfully engineered unconventionally shaped castings and strain gauge tested them to confirm compliance with the design code.

Protecting the Supply of Power to your Home

Vee Bee are one of the largest suppliers to the *Power Generation* market supplying strainers and filters to *Major Nuclear and Turbine OEM's* in both the *USA* and *European* markets. Products are specifically designed to meet these pressure, temperature and flow sensitive applications.

Sailing out for Oil Recovery

In addition to leading the *Power Generation* market Vee Bee's historic marketplace has been increasingly successful in the *Oil & Petrochemical Industry* supplying a vast range of strainers and filters on projects such as: *Terra-Nova FPSO, Sable Tier II Project, White Rose FPSO, Malampaya, Kristin Offshore Platform, Belanak FPSO RAS Gas Onshore Expansion Project and the North West Shelf Ventures LNG Project Phase IV*. Having some of the most stringent practices in the world evolving within this particular Industry sector has forced Vee Bee to become astute leaders in engineering, manufacturing, quality and documentation.

A Total Service

Whether we manufacture to order or supply from our stock range, you'll find that Vee Bee's services go well beyond the product itself. Our *Technical Sales Department* will make sure that you get the right equipment for the job first time around. We appreciate that the selection of *Strainers and Filtration* equipment is often left until the final stages of plant design which is why Vee Bee continue to work closely with their foundries to offer responsive turn around times.

Design engineers cannot always spare the time to select the correct unit for a given application. When your team talks to ours, they'll find that our technical sales people will do a lot of the work for them, giving expert advice on sizing and on the most suitable types of equipment for the given application.



Our commitment to setting high standards

It is because Vee Bee recognizes the need to be flexible, and to provide customers with a total, expert service that our company has, despite several recessions, grown steadily and consistently over the years.

The company was *established in 1957 by William V. Bradley*, under the name Filtration and Valves. In 1975 his son Michael V. Bradley took over the company and in 1980 changed the name to "*Vee Bee*". In 1998 the Company was taken over by the third generation family member Robert V. Bradley and in 2001 opened an additional fully operational manufacturing facility in Ontario, Canada.

Although techniques of design and manufacture were naturally changed over the years, Vee Bee has retained the team feeling of a family firm "*one which is totally dedicated to the best interest of its employees and customers*".

Vee Bee Online Ordering

To keep up with today's modern requirements Vee Bee developed their very own web sales online ordering tool. By a simple selection process this system allows you to order a product within seconds, in return it automatically generates a *Purchase Order* and sends a reply acknowledgement and *GA Drawing* directly to your computer. It also allows you to expedite your orders online *24 hours a day 7 days a week* which given Vee Bee's global presence reduces the clients burden of expediting when dealing in different time zones.

An International Service

The market for Vee Bee products stretches across the world and across a wide range of industries. A great deal of recent work has been for major Power Generation, Oil and Petrochemical companies operating hundreds of sites worldwide.

Our Technical Sales force and our network of international agents and distributors ensure that, wherever our customers are based, they are served with the same *high standard of professionalism and care*. Vee Bee's premises are modern and highly efficient. The computerization of many of our administrative systems means that critical functions and requirements such as production planning and documentation can be tightly controlled to ensure that customer's requirements are met.

Vee Bee Site Servicing

Vee Bee have such confidence in their product that they offer extended warrantee services on any product manufactured. If you have a strainer or filter in the field and want it to perform efficiently it needs to be looked after and what better way to do so than to have a *professionally trained Vee Bee technician* to perform the service. Once Vee Bee complete the service satisfactorily they will be more than happy to extend the warranty for a further 12 months or to a date deemed suitable by the visiting technician.



Vee Bee Retrofitting

To complete Vee Bee's commitment to setting high standards they offer the best internals available in today's marketplace. To compliment this Vee Bee have the *ability to retrofit any other manufacturer's parts* offering that purchaser the piece of mind needed when protecting their most valuable investment.

Vee Bee Cleaning & Inspection

Controlling the level of contamination in the pipeline is limited, there will always be the scenario of "*the upstream part failed*", "*the media should be cleaner than it is*", "*we don't have control over the upstream pipework*". To determine contamination levels the strainer or filter *must be monitored for differential pressures* this is the only way of establishing that contamination exists, highlighting the need for inspection. In many cases it is very difficult to determine visually if the internals are contaminated or not which is why Vee Bee set up their Cleaning and Inspection Department. *Cleaning and Inspection will inspect the integrity of the internal parts* and can also determine the level and type of contamination present, in addition the internal will be put through a specialized form of cleaning which has no detrimental effect on the internal parts and has a very high cleaning efficiency.



our quality control team and testing specialists

Vee Bee is accustomed to dealing with the world's major process industries who require products designed and manufactured to the *highest international standards*. The codes to which we have manufactured and supplied read like a roll honor, and we are completely familiar with the documentation and certification requirements of inspecting authorities such as *Lloyds, Bureau-Veritas and Det Norske Veritas*.

Each product manufactured carries with it a passport, which contains all the documentation relevant to the code to which it was designed and constructed, or to the customer's own specification requirements.

Codes of Design & Construction

- ASME VIII
- ASME VIII 'U' Stamp
- ANSI B31.3
- PD5500 Cat 1, 2 & 3
- CE/PED
- CRN
- Norsok
- Chinese 'M' Stamp
- Stoomwezen
- Swedish Pressure Vessel Code
- Australian Pressure Vessel Code
- A.D. Merblatter



Our Strainers, Filters and Pressure Vessels designed and constructed to these codes are available in all the standard materials of construction in use today. These materials include but are not limited to:

- Carbon Steel
- Low Temperature Carbon Steel
- Stainless Steel
- Austinitic Stainless Steels
- *Monel & *Inconel
- Hastalloy
- Titanium
- Other on request

* Trademark of the Inco Group of Companies

At Vee Bee quality is more than a word it's a personal commitment, for this reason we have an independent Quality Assurance department. Our *Quality Assurance Procedures* ensure that the requirements of the client and of the design code are met at all stages of manufacture, from the purchasing of the raw materials right through to assembly, final test and delivery.

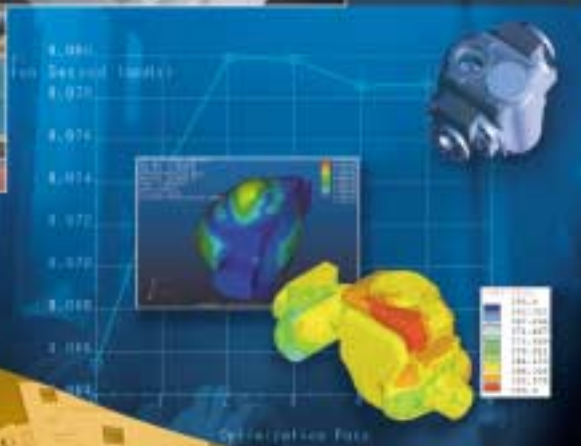
These procedures meet the requirements of *ISO 9001:2000*. The Vee Bee Quality Assurance manual is produced to this code. Goods destined for the European market will be CE marked in accordance with the latest legislation. Accommodations can be made should CE marking be required outside the European Community.

The majority of products manufactured endure vigorous testing. Our Hydrostatic facilities can pressure test up to 910 BarG (13,200 psig) and our Pneumatic facilities can test to a pressure of 413 BarG (6,000 psig) nitrogen. Vee Bee can also offer actual flow simulated proof tests on their in-house liquid flow test rig (air proof testing also available).



Other tests include:

- Magnetic Particle Inspection
- Positive Material Identification
- Dye Penetrant Examination
- Strain Gauge Analysis
- Brittle Lacquer
- Radiography
- Ultrasonic
- Cryogenic



our pipeline protection product line

www.veebee.com

Vee Bee is a worldwide, ISO 9001:2000 certified manufacturer of 'specialised filtration equipment' (Strainers & Filters) for industrial and commercial applications. Vee Bee offer solutions to your pipeline filtration requirements as well as being able to retro-fit existing systems. Whether the need is for a simple low pressure, low flow application or a high pressure, high flow application we design and manufacture strainers and filters specifically to suit your requirements. We can meet a host of filtration retention levels, specifications and requirements enabling us to offer a wide variety of meshes, materials and ratings ranging from Cast Iron to Inconel and Class 125lb to Class 2500lb and higher. In addition Vee Bee will supply in accordance with any of your design & construction certification requirements: *ASME VIII, ASME VIII 'U' Stamp, ANSI 3, PD5500 Cat 1,2 & 3, CEPED, CRN, Norsok, Chinese 'M' Stamp, Stoomwezen, Swedish Pressure Vessel Code, Australian Pressure Vessel Code, A.D. Merblatter*

Y-TYPE STRAINERS

BUTT WELD/SOCKET WELD

- SW Ends 0.5" (15mm) to 2" + (50mm+)
- BW Ends 0.5" (15mm) to 14" + (350mm+)
- Various forged and cast materials of construction
- Maximum pressure ratings API 10,000lb
- Wide range of screening materials available



SCREWED

- Sizes: 0.5" (15mm) to 2" + (50mm+)
- Screwed Ends API, BSP, NPT
- Various forged and cast materials of construction
- Maximum pressure ratings ANSI Class 1500lb
- Wide range of screening materials available



FLANGED

- Sizes: 0.5" (15mm) to 20" + (500mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- Various forged and cast materials of construction
- Maximum pressure ratings API 10,000lb
- Wide range of screening materials available



FLANGED (PTFE LINED)

- Sizes: 0.5" (15mm) to 12" + (300mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- Materials of construction Cast Carbon PFA/PTFE
- Maximum pressure ratings ANSI 300lb
- Wide range of screening materials available

MONO TYPE STRAINERS

QUICK RELEASE COVER

- Sizes: 0.5" (15mm) to 36" + (900mm+)
- Flanged Ends ANSI, BS4504 (DIN, PN), BS10
- BW Ends, Schedule as required
- Screwed Ends API, BSP, NPT
- Various cast materials of construction
- Maximum pressure ratings ANSI Class 300lb
- Wide range of screening material available



BOLTED COVER

- Sizes: 0.5" (15mm) to 36" + (900mm+)
- Flanged Ends ANSI, BS4504 (DIN, PN), BS10
- BW Ends, Schedule as required
- Various cast materials of construction
- Maximum pressure ratings ANSI Class 2500lb
- Wide range of screening material available

DUAL TYPE STRAINERS

SWING GATE

- Sizes: 0.5" (15mm) to 4" (100mm)
- Flanged Ends ANSI, BS4504 (DIN, PN), BS10
- Screwed Ends API, BSP, NPT
- Various cast materials of construction
- 100% shut-off for gas applications
- Quick release or bolted covers
- Maximum pressure ratings ANSI Class 300lb
- Handling temperatures in excess of 500°F



HIGH PRESSURE

- Sizes: 4" (100mm) to 48" + (1200mm+)
- Flanged Ends ANSI, BS4504 (DIN, PN), BS10
- Various fabricated materials of construction
- 100% shut-off for gas applications
- Quick release or bolted covers
- Actuated changeover available
- Skid bases and framework also available
- Maximum pressure ratings ANSI Class 1500lb



SCREW GATE

- Sizes: 3" (80mm) to 32" + (800mm+)
- Flanged Ends ANSI, BS4504 (DIN, PN), BS10
- Various cast materials of construction
- 100% shut-off for gas applications
- Quick release or bolted covers
- Actuated changeover available
- Maximum pressure ratings ANSI Class 600lb
- Handling temperatures in excess of 500°F



FABRICATED

- Sizes: 4" (100mm) to 48" + (1200mm+)
- Flanged Ends ANSI, BS4504 (DIN, PN), BS10
- Various fabricated materials of construction
- 100% shut-off for gas applications
- Quick release or bolted covers
- Actuated changeover available
- Skid bases and framework also available
- Maximum pressure ratings ANSI Class 300lb

To any industry time is a valuable commodity and to be offline any time, from hours, to days can be very damaging to their output. For over forty five years, Vee Bee has been a committed and dependable supplier of quality Strainers and Filters to protect customers process equipment (boilers, condensers, flowmeters, heat exchangers, nozzles, oil burners, pumps, valves and regulators) from being damaged by pipeline debris.

Vee Bee, cast and fabricated pipeline strainers, filter media from an array of applications. We ensure the highest quality possible, offering the user 100% efficiency, longer lifetimes and unmatched reliability. Various service media include lubricants, chemicals, fuels and gases, steam and water. Industries currently supplied include Petrochemical, Automotive, Pharmaceutical, Nuclear, Power Generation, Chemical, Food & Beverage, Pulp & Paper and Water Treatment.

FABRICATIONS & CUSTOM BUILDS

FABRICATION Y

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- BW Ends from Sched 40 to Sch 100 + Special Sched
- Carbon Steel, Low Temperature Steel, S/S, Duplex S/S Alloy Steel or other materials available
- Maximum pressure rating class 2500lb+ (172 BarG+)



FABRICATION MONO

- Sizes: 0.5" (15mm) to 78" + (1980mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- BW Ends from Sched 40 to Sch 100 + Special Sched
- Carbon Steel, Low Temperature Steel, S/S, Duplex S/S Alloy Steel or other materials available
- Maximum pressure rating class 2500lb+ (172 BarG+)

CARTRIDGE FILTERS

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- SW Ends from Sched 10 to Sch 160 + Special Sched
- BW Ends from Sched 40 to Sch 100 + Special Sched
- Carbon Steel, Low Temperature Steel, S/S, Duplex S/S Alloy Steel or other materials available
- Maximum pressure rating class 2500lb+ (172 BarG+)



FABRICATION PTFE LINED

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- Carbon Steel, Low Temperature Steel, S/S, Duplex S/S Alloy Steel or other materials available
- Maximum pressure rating class 2500lb+ (172 BarG+)

AUTOMATIC SELF CLEANING

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Various fabricated and cast materials of construction
- Maximum pressure rating class 300lb



FABRICATION TEE

- Sizes: 0.5" (15mm) to 78" + (1980mm+)
- Flanged Ends ANSI, BS4504, DIN, BS10, JIS
- BW Ends from Sched 40 to Sch 100 + Special Sched
- Carbon Steel, Low Temperature Steel, S/S, Duplex S/S Alloy Steel or other materials available
- Maximum pressure rating class 2500lb+ (172 BarG+)

CUSTOM BUILDS

- umbilical filters, ethylene strainers, condensate filters, mist eliminators, waste water tank filters, rubber lined water filters and strainers, desorbent filters, p-benzoquinone filters, foot strainers, gland steam separator, over flash coke catcher strainer, oxygen filters, debris filter plates, coalescers, piping systems, actuated packages

CONICAL

HIGH PRESSURE

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Various S/S, Monel, Duplex, Carbon Steel, etc...
- Maximum pressure rating class 2500lb+ (172 BarG+)



WITCHES HAT

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Various S/S, Monel, Duplex, Carbon Steel, etc...
- Maximum pressure rating class 2500lb+ (172 BarG+)

CONICAL

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Various S/S, Monel, Duplex, Carbon Steel, etc...
- Maximum pressure rating class 2500lb+ (172 BarG+)



WEDGE WIRE

- Sizes: 0.5" (15mm) to 30" + (750mm+)
- Various S/S, Monel, Duplex, Carbon Steel, etc...
- Maximum pressure rating class 2500lb+ (172 BarG+)

SPARES, CLEANING & INSPECTION, SITE SERVICING, RETRO-FITTING



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