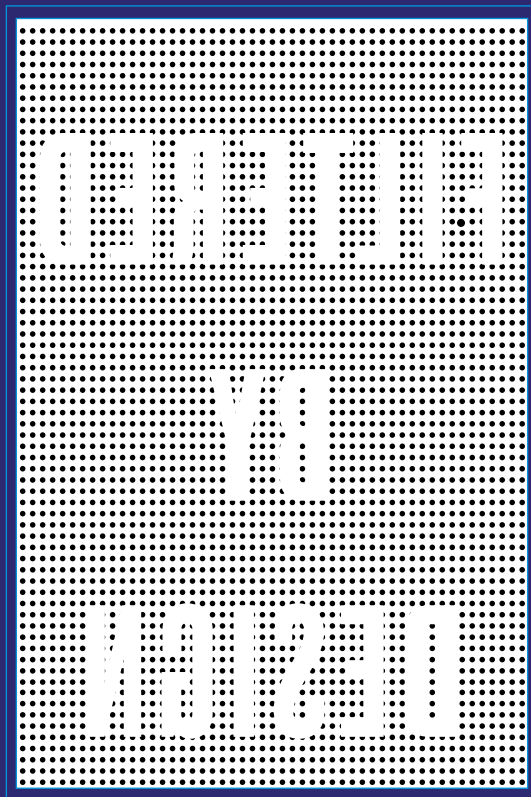


**FILTERED  
BY  
DESIGN**



THEY SAY THE CERTAINTY OF EVERY CHALLENGE IS THAT IT COMES WITH A SOLUTION. AND TO FIND THE MOST APPROPRIATE ONE, WE MUST FILTER OUT THE UNNECESSARY AND THE NOT SO IMPORTANT ONES, UNTIL THE PERFECT ONE EMERGES TO SERVE OUR PURPOSE. THIS PROCESS IS THE MARVEL OF THE MIND. THE OUTCOME IS NOT BY CHANCE, BUT BY DESIGN.

JUST LIKE THE MIND FILTERS OUT THE UNNECESSARY FOR CLARITY IN THINKING, PANCHSHEEL FOCUSES ON FILTRATION AND WORKS WITH INDUSTRY TO ELIMINATE THE UNNECESSARY AND UNWANTED, DELIVERING RESULTS AS CLOSE TO FLAWLESS AS POSSIBLE. COMMITTED TO QUALITY, PANCHSHEEL IS NOW SYNONYMOUS WITH THE ART OF SERVICE AND THE SCIENCE OF DESIGN.

# FILTERED BY DESIGN

# WAY AHEAD OF ITS TIME

From serving one company and one industry to embracing all; from developing a few types of filters to designing the entire array of filters and filtration systems; from using one medium to exploring and adopting the entire gamut of media and materials; from a modest few enterprising individuals' company to creating employment for many, Panchsheel has been living the "Make in India" dream way ahead of its time.



## FACILITATING MAKE IN INDIA BY DESIGN

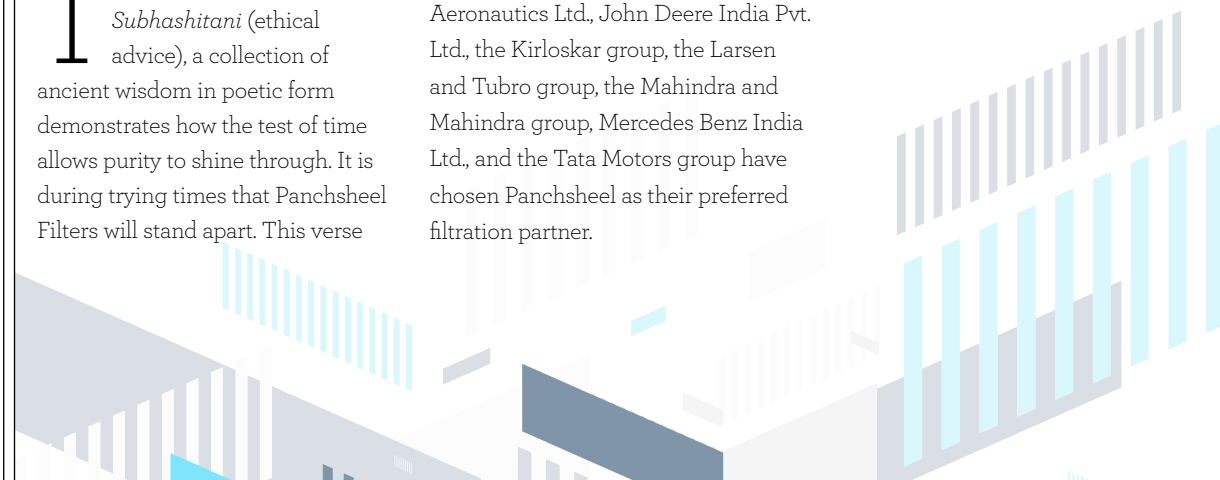
॥ काकः कृष्णः पिकः कृष्णः  
को भेदः पिककाकयोः ।  
वसन्तकाले संप्राप्ते  
काकः काकः पिकः पिकः ॥

*The crow is black, and so is the koel. What then is the difference between them? The onset of spring, demonstrates the difference between the crow and the koel.*

This extract from the *Sanskrit Subhashitani* (ethical advice), a collection of ancient wisdom in poetic form demonstrates how the test of time allows purity to shine through. It is during trying times that Panchsheel Filters will stand apart. This verse

has been our bedrock and our inspiration since the beginning.

Having served and grown with leading companies in India for over 30 years, Panchsheel is an organic Indian answer to the world of filters and filtration. Panchsheel was amongst the pioneers of indigenized filtration specialists. From operating out of 400 sq. feet in 1987, the then bootstrapped Panchsheel is now spread across 14,000 sq. feet, offering filtration solutions for shop-floor applications to engineering industries with the widest variety of filter media. Virtually eliminating the need for imported filters and filtration systems, Panchsheel guarantees quality with in-house, state-of-the-art testing and free monitoring. Not only do Panchsheel's filters reduce downtime, wasted man-hours, and inventory; the cost difference with imported filters- in cases, as much as 90%, also promises unbelievably low operating and replacement costs. The 30+ year relationship with SKF India Ltd., the first customer, is proof of lasting relationships and quality. Cutting across industries and businesses organizations like the Bajaj Auto group, Bharat Aluminium Company Ltd., Bharat Forge Ltd., the Cummins India group, Eaton Fluid Power Ltd., Essar Steel Ltd. (Now Arcelor Mittal Nippon Steel India Ltd.), Hindalco Industries Ltd., Hindustan Aeronautics Ltd., John Deere India Pvt. Ltd., the Kirloskar group, the Larsen and Tubro group, the Mahindra and Mahindra group, Mercedes Benz India Ltd., and the Tata Motors group have chosen Panchsheel as their preferred filtration partner.



**A**s a pioneering filtration company in India, Panchsheel has set the benchmark for quality and service since 1987. The company was founded by a seasoned IIT and Stanford alumnus with a Ph.D. in Chemical Engineering and it benefits from technically competent leadership for new filtration system designs and development. The 75 years of cumulative hands-on experience of the directors in the development and design of filtration systems has been the best teacher in the super-niche filtration business.

This is bolstered further by full-service R & D and testing facilities. Extensive in-house manufacturing

capabilities and deep-rooted connections for the development and procurement of a wide array of filtration media are the secret ingredients that make all the difference. Little wonder, the company emerges as the best option for most companies after filtering out the rest of the Indian competition. It is, indeed, by design, a one-stop-shop for all filtration solutions.



# A ONE-STOP-SHOP, BY DESIGN, FOR FILTRATION SOLUTIONS

# WHAT TRULY SETS PANCHSHEEL APART IS ITS TECHNICAL PROWESS

## CUSTOMIZED SOLUTIONS

The company doesn't believe in "one size fits all". It delves deep, understanding all aspects of the challenge before providing solutions. The practice at Panchsheel is to custom design everything from scratch - the housings as well as filters.

## SPEED AND AFFORDABILITY

Cumbersome, unwieldy, imported items have been cleverly substituted with very low-cost, ready stock items with better performance. Imported filters are expensive, need a high lead time, and have minimum order quantities. Hence, large inventories are needed to safeguard against downtime and to avoid emergencies. Panchsheel maintains an inventory of standard, regularly consumed items, leading to a lower ETA in terms of delivery of filters and eliminating the

need for large inventories on the client's side. There have been instances where Panchsheel has manufactured and supplied filters in less than two hours.

## COMPLETE TRANSPARENCY

Panchsheel does not recommend any product unless it is required or adds value. In fact, sometimes solutions that avoid the use of unnecessary filters or related equipment have been offered. Customers have remained loyal to Panchsheel for its technical superiority, competitive pricing, and straightforward, truthful communication, which is a rarity in any business. This has ensured long-term relationships, some as old as 30+ years.

Prioritizing user experience over brand building, Panchsheel registered its trademark after 25 years of building its "brand value."

# STRENGTHS THROUGH DESIGN AND DELIBERATION



When there's an inquiry, a technical team physically visits the site to assess the plant's specific requirement. After a thorough internal discussion, an initial proposal is sent. Alterations are made to accommodate the feedback, following which a prototype is made with proof of performance. The final proposal elicits a PO and production begins. Panchsheel supplies filters, monitors performance, makes changes if needed, and regularises the supply.

#### THREE STEPS TO IMPROVE EXISTING RESULTS:

1. Replace filters in the existing systems without changing the system.
2. Replace filters and modify the systems without impacting the application process.
3. Add a parallel system in addition to the existing system without causing any hindrance to the process to improve results and reduce the load on the system.

The state-of-the-art research and development also help the company in offering an array of services like designing filters and filtration systems, consultation for improvements and monitoring filtration of fluids, and testing of contamination in liquids and components.



Panchsheel experts visit the site and get to the root cause of the problem, then customise a solution that eliminates the problem from its root in the shortest possible time. Everything that Panchsheel does is backed by technical substantiation. The in-house lab is equipped to study all the properties of available media like air permeability, water permeability, pore size, resistance to flow, its strength and suitability, etc. If the existing medium is not available, it is replaced with the nearest available superior medium. In case this is not feasible, the

original filters are retained to ensure results, and large-sized pre-filters are added to reduce costs. The objective, at all times, is to achieve satisfactory results at the lowest possible cost.

#### Testing

The in-house lab plays a vital role in the development of new designs and customizations, and testing of prototypes to ensure that the desired level of filtration is met. It is also used to monitor the performance of filters already supplied by Panchsheel.

R & D is ready to cater to any

application. The products match or better the performance and are also cost-effective when compared with the original or imported products.

#### Product Traceability

Records are maintained at every level of everything that goes into all that Panchsheel manufactures. This helps in tracing the product details right up to its source material in the event of any unforeseen challenge that may arise. Drawings are made for each and every item. This, along with the documentary evidence, ensures an identical supply for every lot.

# QUALITY ASSURANCE BY DESIGN

# THE WORLD OF PANCHSHEEL

## WHAT



1. Oils (Organic/Synthetic)



2. Coolants



3. Glycol



4. Water



5. Chemicals



6. Air



7. Other gases

## WHERE



1. Hydraulics and lubrication



2. Machining fluids



3. Washing



4. Component flushing



5. Dust collection



6. Exhaust Mist



7. Quenching



8. Engine testing



9. Dynamometer



10. Cooling tower



11. Paint shop



12. Effluent treatment



13. AHUs and Clean Room

## USING PRODUCT RANGE

1. Filtration systems & housings



- a. Standalone filter housings
- b. Portable filtration units
- c. Filtration systems

2. Filter elements



- a. Pleated filter cartridges
- b. Filter bags
- c. Basket filters
- d. Wound type filter cartridges
- e. Air panel filters
- f. Filter belts

3. Filter fabrics



- a. Viscose bonded
- b. Spunbond Polypropylene
- c. Polyester needle felts
- d. Synthetic water-absorbent fabric
- e. Non-std. items

# THE SPECTRUM OF PRODUCTS

## FABRICS

Panchsheel maintains an enviable inventory and has almost any given filtration fabric within easy reach. It has studied and analysed different fabrics and can almost intuitively suggest the appropriate fabrics for different machines or applications like washing, boring, drilling, milling, grinding, honing, lapping, etc.

## ELEMENTS & CARTRIDGES: MEDIA

Panchsheel can replace any imported filter element irrespective of the size or design as per the application.

The stock of filtration media ranges from 1 to 1000 microns and beyond and is available in a large variety of raw materials like cellulose paper, SS mesh, micro-glass fiber, polyester felt, polypropylene, nylon, HDPE, composite materials, etc.

## SYSTEMS & HOUSING

### 1. Complete filtration systems:

These are systems that include automation, pumps, tanks, housings, etc. This is a holistic solution that is tailor-made based on specific process requirements and to meet expected

performance output. Systems are designed to integrate seamlessly with the existing setup of machinery and processes.

**2. Portable filter units:** These are oriented around existing workflow, and can be easily inserted and removed from existing filtration processes and systems. Not only do these ensure that quality standards are maintained, but they are also a cost-effective solution. They run offline, independent of the operation of the machine.

**3. Standalone filtration units:** These custom-designed filtration units include only the housing and the filter elements. They are supplied in various sizes and designs based on the application and operating parameters. They are more like add-ons to the existing system for improving performance and reducing costs.

Growing from strength to strength, and poised to take a quantum leap, Panchsheel is broadening its spectrum of filters, related materials, and filtration systems across industries. Its name is bound to resonate in India's success.



Heavy duty portable oil filtration unit



3000 sq ft godown for filter fabrics, ensuring ex stock availability of all fabrics.



Representative image of air filter elements.



Some of the standard filter housings.



Standard range of air panel filters.



Some of the filter elements, including hydraulic filters, coolant filters, etc.



Representative image of paint shop filters.



Standard range of bag filters, press filter media and drum filters for liquid filtration.



Standard range of dust collection bags.



A typical filtration system.



Special fabricated items, baskets, cages and coolant panel filters.



Standard range of panel type mist filters.

# SPECIALITY ITEMS

SUPPLIED TO DATE BASED ON OWN DESIGN AND DEVELOPMENT



Special fabricated w-type strainer for Essar Steel.



SS mesh welded filters, without adhesive for critical and high temperature application.



Portable dust collection unit.



Modified ELC Unit with pre filter, increases efficiency, reduces filtration time, also acts as a coalescer.

1. Pleated felts with/without mesh supports suitable for water/glycol/coolant - where the standard automotive yellow/white paper is not suitable and soft felts cannot be used as they are not pleatable.
2. Superfine felt fabrics for honing oil, lapping oil, etc.
3. Fabric of high strength for Hoffman make and other similar vacuum band units, with take-up roll and no conveyor support for the fabric - used for Hoffler Grinding and similar m/c.
4. Dual media -high loft + felt - to substitute high-cost fine EU-5 felt for paint shops.
5. SS mesh, welded filters, without adhesive.
6. Synthetic hydrophilic fabrics with a uniform pore distribution and high strength.
7. Customised fabricated filters with non - std designs.
8. Wash water filters.
9. Dynamometer water filters.
10. Superfine prefilters for electrostatic oil cleaners - Designed for Ferrocure Machines Ltd., Envair Electrodyne Ltd., and many others.
11. Portable Oil Filter units for super fine filtration. Work despite moisture presence.
12. Portable Coolant Filter unit with tray and fabric roll mounting arrangement.
13. Portable Dust Collector - for dry grinding.
14. Wet-scrubber for CNC m/c exhaust mist with water, oil, dust.
15. Oil-water separation units.
16. One-is-to-one import substitutes for major brands like Hydac, Rexroth, Pall, EPE, Mahle, Taisei Kogyo, etc.

# KEY SUPPLIES

FOR AN ARRAY OF LIQUIDS AND GASES IN HUGE CAPACITIES

1. Large filter unit for cooling water - Kalyani Carpenter Special Steels Ltd. (Now Saarloha Advanced Materials Pvt. Ltd.), Pune - 10000 Lpm.
2. Large filter unit for Compressed Nitrogen Gas - Essar Steel Ltd. (Now Arcelor Mittal Nippon Steel India Ltd.) - 30000 CMH
3. Large filter unit for mist removal - Century Enka Ltd., Bharuch, and Chinchwad - 10000 CMH + many smaller ones.
4. Gearbox flush oil filter - Walchandnagar Industries Ltd., Indapur - 2000 Lpm.
5. Honing oil fine 2-stage filter - SKF Bearings India Ltd, Bangalore - 400 LPM.
6. Filtration system inclusive of flushing, contamination level < NAS 4 for Hindustan Aeronautics Ltd. ATF (aircraft fuel tank). Refer case study.
7. Seal oil filtration for Alstom Bharat Forge (Now GE Power Systems India Pvt. Ltd.). 600 Lpm - Reduced time from several days to a few hours. Refer case study.
8. Filtration System for tractor rock shaft flushing - John Deere, Pune, contamination level of < ISO 16/13 (<NAS 7). Awarded Best Supplier in Indirect Material Category 2018-19.
9. 21 Coolant Filter Units supplied with pleated cartridges, instead of bag filters. Filtration area 12.5 times that of bag filters. Client - General Motors
10. Oil separator unit where recovered oil is re-usable. Client Kalyani Carpenter Special Steels Ltd. (Now Saarloha Advanced Materials Pvt. Ltd.).



Large filter unit for compressed Nitrogen gas, for erstwhile Essar Steel, 30000 CMH.



Coolant filter units supplied for General Motors with pleated cartridges instead of bag filters, which results in multi fold increase in filtration area.



Special unit for separation of tramp oil from coolant, the separated oil is reusable, for Kalyani Carpenter.

# FILTRATION SYSTEM FOR AVIATION TURBINE FUEL

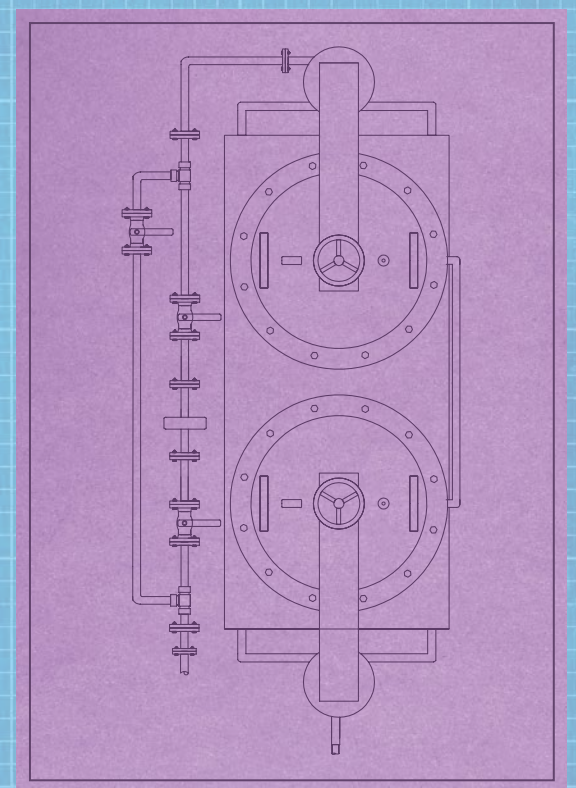


## CASE STUDY



**H**industan Aeronautics Limited (HAL) periodically overhauls all aircraft. HAL used a Russian filtration system to achieve GOST Class 6 (equivalent to NAS 4) cleanliness levels of the aviation turbine fuel (ATF) used to flush the fuel tanks of these aircraft. Panchsheel, with its technical expertise, developed and replaced filters for their existing Russian filtration system while adhering to GOST Class 6 cleanliness levels.

HAL acknowledged the superlative performance by entrusting the entire responsibility of setting up a new filtration system for their new hangar to Panchsheel instead of the Russian manufacturers. And Panchsheel delivered indigenous filtration systems for ATF without compromising on quality. To date, the company has supplied three identical filtration systems to HAL.



**ACHIEVED  
NAS LEVEL 4  
(GOST  
LEVEL 6).**

**HANDLING  
OF CRITICAL  
FILTRATION  
OF ATF.**

**REPLACED  
IMPORTED  
RUSSIAN  
SYSTEMS.**

Y  
B  
T  
S  
E  
A  
S  
G

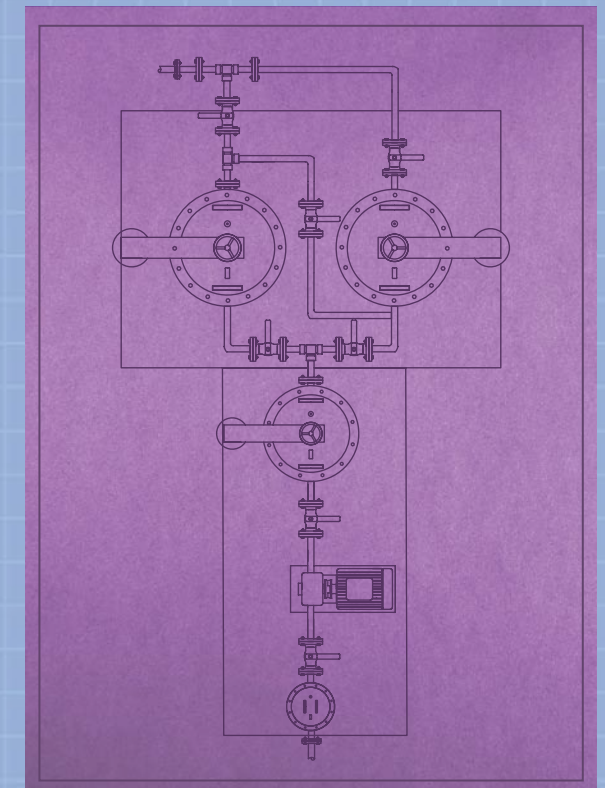
# CRITICAL LEVEL OF CLEANLINESS BY DESIGN



**Panchsheel filtration systems playing a critical role to ensure safety and performance of the highest standards.**

**A**lstom Bharat Forge (now GE Power Systems India Pvt. Ltd.) uses highly flammable hydrogen gas regularly for testing of gigantic motors used in turbines, at Sanand in Gujarat. This mandates using hydraulic pressure to seal the joints of a highly flammable gas passage. This sealing arrangement is used to prevent gas leaks and explosions, which could be disastrous. Constant hydraulic pressure on the sealing joints keeps them intact and ensures safety at all times. It is imperative that the oil used for the sealing arrangement be as clean as at least NAS 5 level.

The filtration process of the 5000-litre oil tank used to take about two to three days with their existing system to achieve the cleanliness level of NAS 5. The requirement was to reduce the time taken to the bare minimum possible. Panchsheel built a system that could clean the entire tank up to the NAS 4 level in just five to six hours, saving days of the waiting period, several man-hours for the company, and taking the oil's cleanliness to the next level.



**FILTRATION  
PROCESS REDUCED  
FROM  
2-3 DAYS  
TO 5-6 HOURS.**

**DESIGNED  
FOR  
A 600 LPM  
FLOW.**

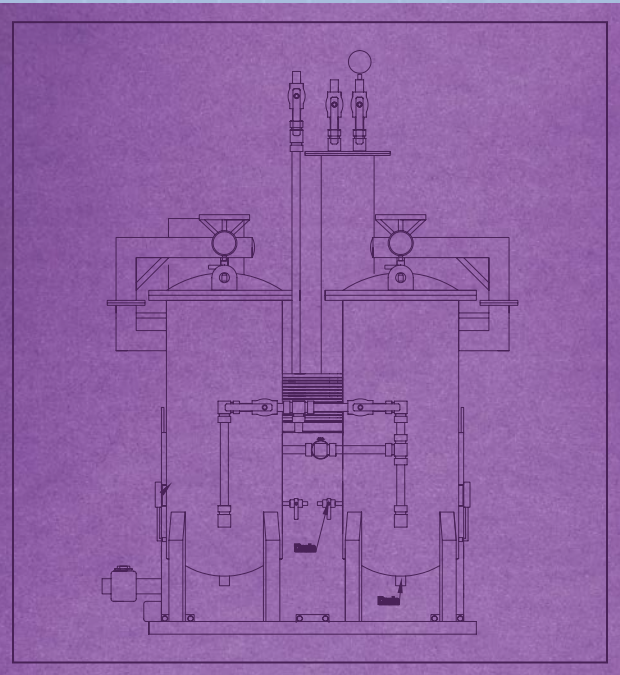
**EXPECTED  
CLEANLINESS  
LEVEL OF NAS 5  
ENHANCED TO  
NAS 4.**

CLIENT:

PROJECT:



# FILTERING OUT THE COMPETITION



Not satisfied with the filtration results and costs incurred, John Deere approached Panchsheel to improve the performance of their existing filtration system. It initially started with a pilot project on a single system. Panchsheel, with an indigenous solution, adhered to global standards and managed to arrive at a fixed per component cost of filtration. Outstanding performance on this system led to an AMC with JD for the maintenance and management of multiple filtration systems. This further led to the development of new holistic filtration systems for John Deere - a complete solution inclusive of tanks, pumps, heaters, filtration units, etc., and built-in automation for efficient operation.

It came as no surprise when Panchsheel was conferred with the “Best Supplier” award in the Indirect Material Category, 2018-19.

ACHIEVED  
CONSISTENT NAS 7  
FILTRATION LEVELS  
WITH NO CAPITAL  
EXPENDITURE.

PER  
COMPONENT -  
BASED AMC FOR  
FILTRATION  
EXECUTED.



# YOUTHFUL CASES

## MAHINDRA & MAHINDRA LTD., NAGPUR.

Short lifespans of critical filters in their workflow not only increased production costs, but also necessitated a large inventory of imported filters. On-site visits and monitoring of the existing workflow along the defined parameters led to an unexpected solution. A series of inexpensive pre-filters inserted just

before the original filter housing not only reduced the dirt much earlier in the process but also reduced the load on the existing filters, thus increasing their lifespan dramatically. Filtration costs dropped from Rs.402 to Rs.104 per component with the addition of Panchsheel units, which effectively had a one-time cost of less than 0.5% of the annual savings of over Rs. 2 crore.

## KALYANI CARPENTER SPECIAL STEELS PVT. LTD. (NOW SAARLOHA ADVANCE MATERIALS PVT. LTD.)

Panchsheel is equally at home with large projects too. Kalyani needed a large filter unit rated for 10,000 Lpm flow coming from a 12" pipeline

for cooling tower water filtration. The solution was a customised filtration unit - 800 ID x 1500 Ht. in size. It was provided along with an innovative triple basket design to maximise the filtration area and also ensure easy replacement and maintenance of the elements.

## CENTURY ENKA LTD., BHARUCH & BHOSARI.

The mist generated during various operations is hazardous to human health. It is very fine and often requires expensive fine filters. However, Panchsheel has designed and supplied large-sized reusable filters to Century Enka to eliminate the mist of spin-finish oil. The 1200 mm W x 1200 mm H

x 3000 mm L units were rated for 10,000 CMH flow. It consisted of mist pads and deflectors to knock off most of the mist before it could reach the filters. This directly reduced the load on the fine filters, increased their life span, and dramatically sliced replacement costs. Not just that, it practically eliminates the health hazards of inhaling spin-finish oil.

## ESSAR STEEL LTD. (NOW ARCELOR MITTAL NIPPON STEEL INDIA LTD.), HAZIRA.

For a large flow of 30500 SCMh, a mammoth single unit was manufactured, which required minimal maintenance and

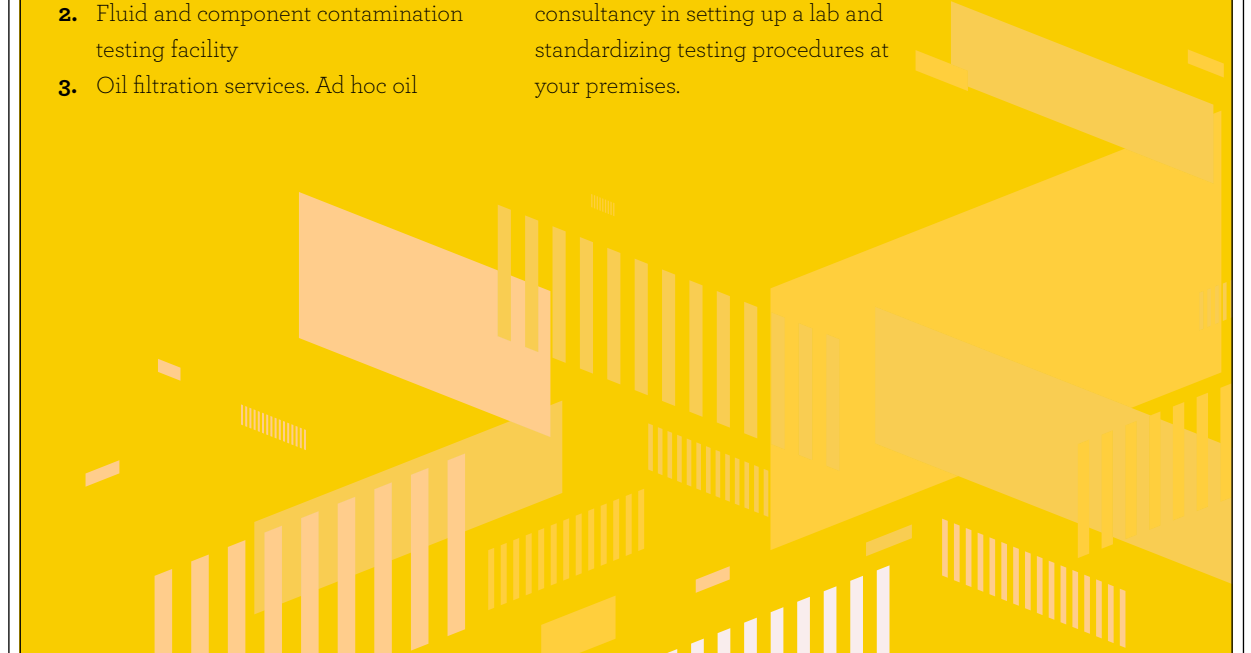
operating cost. It was also very easy to service. This unit was supplied to Essar Steel, Hazira, for compressed Nitrogen gas and the size of the unit was 1000 mm dia x 1500 mm height. Total filtration area = 45 sqm.



Irrespective of the quantity or urgency, Panchsheel offers and delivers a vast range of filters for shop-floor maintenance. All products are guaranteed and tested before delivery. Besides the installation and monitoring services for filtration, Panchsheel also offers the following services.

## STANDARD SERVICES

1. AMC - Annual maintenance contract - maintenance of all filtration equipment.
2. Fluid and component contamination testing facility
3. Oil filtration services. Ad hoc oil cleaning services.
4. Filtration system design consultancy
5. Panchsheel also provides consultancy in setting up a lab and standardizing testing procedures at your premises.



# OEM PRODUCTS

Consistent quality, integrity, and value for money are the distinguishing traits of Panchsheel Filters. These qualities, combined with a flexible approach, make Panchsheel an ideal OEM partner for filtration equipment manufacturers and machine manufacturers. Panchsheel Filters, with its R & D capabilities, assures customised solutions to the most exacting standards for both; large systems or machines. Manufacturers

of large filtration systems and manufacturers of machines where filtration is a part of the system can rest assured of consistent quality and quick delivery irrespective of their location. A large stock also ensures no break in the schedule. Clean Energy Systems, Kirloskar Chillers, Kirloskar Oil Engines Ltd., Miven Mayfran, Span Associates, and Veeraja are all testimonies to Panchsheel Filters' capability as a filter OEM.

## GUARANTEE CONDITIONS

The ISO 9001 certification is proof of our commitment to quality. When it comes to import substitution, Panchsheel guarantees equivalent or better filtration results with a reduction in operation costs.



## IN THE BEGINNING

In 1980, I had a Ph.D. from Stanford and was running a successful chemical projects consultancy in Pune's Pimpri-Chinchwad industrial area. At that time, the 5+ years of practice with its emphasis on quality had initiated and built professional relationships with people and organizations; some of which have endured for over 35 years now. This reputation for quality opened many doors in industries that were contiguous to my speciality-SKF India was a relationship that was different in more ways than one.

SKF had a serious problem sourcing filters, and P. G. Sampat, who was the Purchase Manager of SKF Bearings, entrusted me with manufacturing filters to meet international standards. With his goodwill, trust, and insistence, plus seed money from my brother, a practising physician in the US, a proprietorship 'Speciality Filters' took birth in 1987 in a rented shed of 400 sq. ft. (+200 mezzanine for storage) adjoining the industrial belt. The space could accommodate just the basic machines. SKF, well known for its quality, was not only instrumental in the genesis but was also the best reference that one could get. The SKF reference ensured a warm reception from most of the big companies in the twin towns of Pune and Pimpri-Chinchwad for their filtration needs.

Soon after, Panchsheel Filters Pvt. Ltd. was born. Panchsheel, with its historical symbolism, was an appealing name that replaced Specialty Filters. The client list and the range of filters kept on growing rapidly as we expanded to 3000 sq. ft. of manufacturing area.

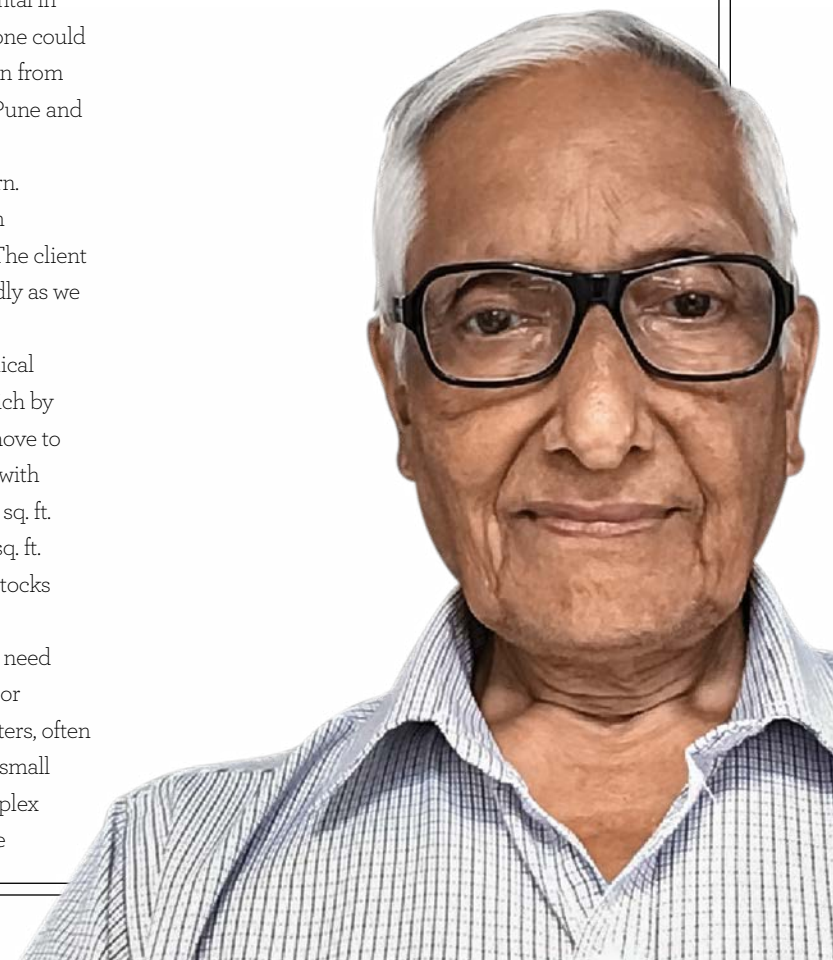
It was time to trim consultation with the chemical industry and focus on the filtration business, which by then had an enviable client list. We decided to move to our own premises in the same locality. It started with a 6000 sq. ft. building, followed by another 4,000 sq. ft. building, which finally led to the present 10,000 sq. ft. of built-up space - enough to manage the huge stocks required to give prompt delivery.

Right from the beginning, we realised that the need and challenge were to provide filters for shop-floor machines. The demand for high-performance filters, often with overnight delivery and at low costs despite small quantities, was a niche market. It was also a complex market because of the huge variations across the

industry: different shapes and sizes, fluids, and operating conditions. The large filter manufacturers were focusing on mass production and numbers for automotive applications, leaving the field wide open. Many times, they directed customers to us.

Our quality spoke for itself, and we soon started supplying to major industrial hubs across India. What started as a small unit with only SKF as its only client was beginning to be known as a fast-growing filtration specialist. Two very competent and young directors joined Panchsheel in 2011 and accelerated its growth and increased its portfolio even further. Today, Panchsheel Filters is in the process of filtering out the inept and becoming a one-stop-shop by design for all filtration systems, filters, related parts, and equipment.

**Dr. Subramaniam Pancharatnam**  
**Founder Director,**  
**Panchsheel Filters Pvt. Ltd.**



# CUTTING FILTRATION COSTS

One of the biggest challenges for engineers and machine tool operators is, how to increase efficiency and maximise the performance of all the coolants and lubricants used in manufacturing processes in different industries. Efficient filtration or the lack of it can not only have a severe impact on the quality of the end product but also add to the cost of manufacturing, increase downtime, and reduce tool life.

Manufacturers are under constant pressure to reduce operating costs and improve output. A major but almost invisible factor affecting the operating efficiency of the different processes are filters and filtration systems.

No wonder, achieving optimum filtration at the lowest possible cost is the holy grail of modern filtration systems. Unfortunately, most filtration solutions are built around existing, pre-designed, standardised filtration equipment for all processes. These solutions save the design cost of the filtration solution provider and, while theoretically cutting costs, more often than not raise the operational costs of the customer and also compromise the filtration efficiency demonstrating that there are no one size fits all solutions in filtration.

For example, filtration solution providers would have standardised models of 100 Lpm flow, 500 Lpm flow, etc. If the flow rate of the concerned system is 250 Lpm, then the solution provider would either push the 100 Lpm model, resulting in higher consumption costs and a possible compromise on filtration levels; or push or 500 Lpm, which would increase capital costs. Moreover, the solution providers are constrained by the standard available filter cartridge models in designing their systems.

Panchsheel's customised filtration solutions address real-life, not ideal, situations. The resultant ISO/NAS levels attained by the fluids are therefore not just notional but objective and measurable. More importantly, they are at the actual operating conditions of the manufacturing processes.

The in-house expertise in the manufacturing of filtration systems and filter cartridges allows Panchsheel the freedom to be completely flexible in terms of sizing as well as the choice of filtration media. This flexibility and the vast array of filtration media ensure required filtration levels at the lowest possible costs. Backed by a state-of-the-art R & D lab that is constantly testing and churning out efficient filter designs. Panchsheel cuts no corners in helping clients cut their filtration costs in the long run.

**Nikhil Bafana**  
Director,  
Panchsheel Filters Pvt. Ltd.



# OUR VALUES ENSURE QUALITY AND BUILD RELATIONSHIPS

3<sup>1st</sup> October, 2018, midnight was a defining moment for Panchsheel Filters Pvt. Ltd. Within a few hours, the company that was built over the last 30 years was completely engulfed with fire and reduced to ashes.

Despite the huge setback the company was up and running and delivered its first order within two days of the tragedy. Not a single order was lost, neither were the customers put through any inconvenience on account of delivery delays.

This was achieved on the back of unflinching support of our employees, unwavering trust of our vendors, and the complete confidence in our capabilities displayed by our customers.

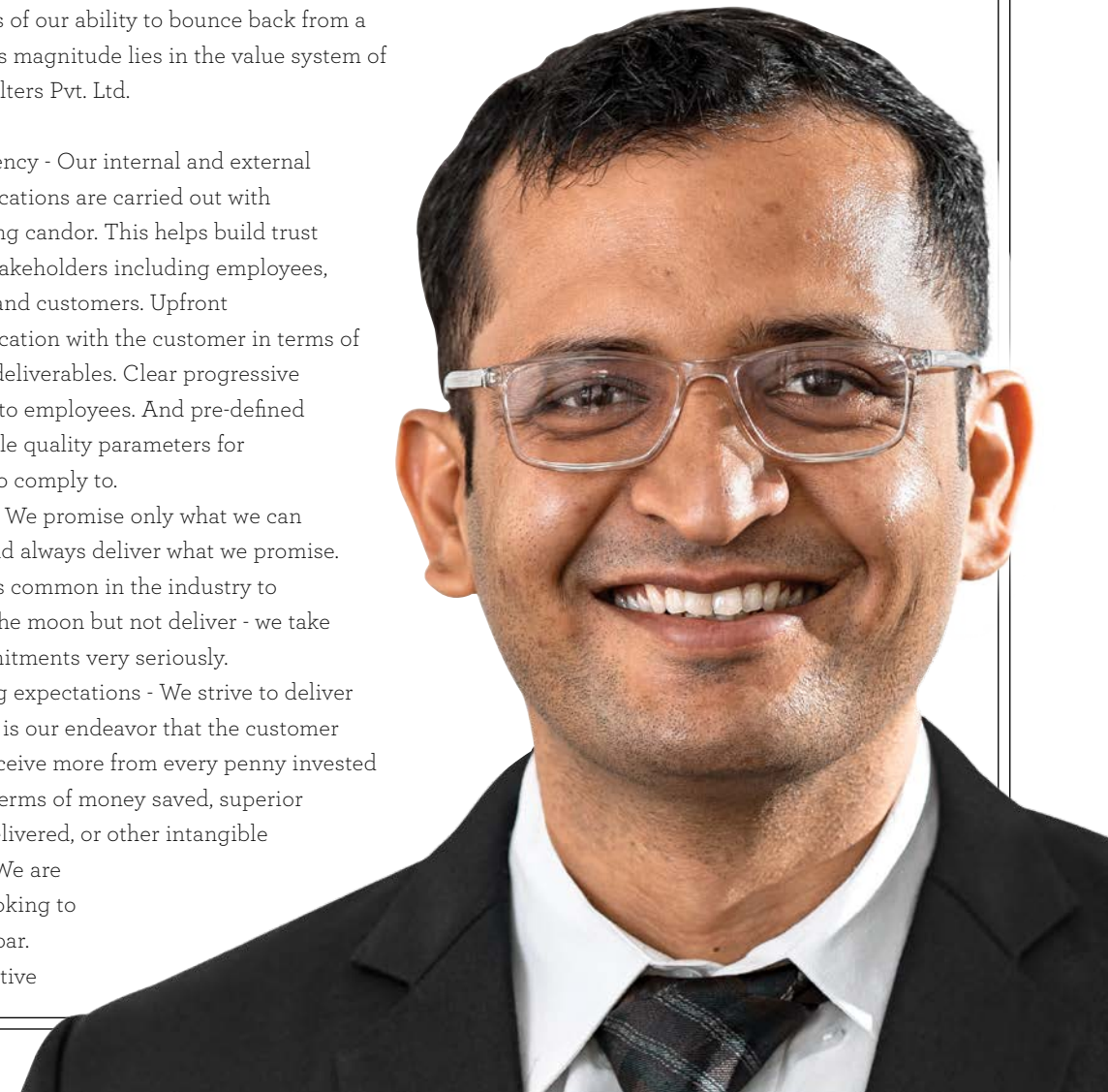
The genesis of our ability to bounce back from a disaster of this magnitude lies in the value system of Panchsheel Filters Pvt. Ltd.

## Our Values

- Transparency - Our internal and external communications are carried out with unwavering candor. This helps build trust with all stakeholders including employees, vendors, and customers. Upfront communication with the customer in terms of scope of deliverables. Clear progressive feedback to employees. And pre-defined measurable quality parameters for vendors to comply to.
- Honesty - We promise only what we can deliver and always deliver what we promise. While it is common in the industry to promise the moon but not deliver - we take our commitments very seriously.
- Exceeding expectations - We strive to deliver "value". It is our endeavor that the customer should receive more from every penny invested - be it in terms of money saved, superior quality delivered, or other intangible benefits. We are always looking to raise the bar.
- Collaborative

Approach - Providing tailor-made solutions with minimum impact to existing processes after a thorough understanding of the entire customer ecosystem with continuous feedback and suggestions from the customer

**Akshay Bafana**  
Director,  
Panchsheel Filters Pvt. Ltd.



## HEAVY ENGINEERING AND MANUFACTURING

1. Alfa Laval (I) Ltd.
2. Bharat Forge Ltd.
3. Bosch Ltd.
4. Century Enka Ltd.
5. Crompton Greaves Ltd.
6. Cummins India Ltd.
7. Cummins Technologies India Ltd.
8. Eaton group
9. Elecon Engineering Co. Ltd.
10. Fairfield Atlas Ltd.
11. Ferrocare Machines P. Ltd.
12. Finolex Cables Ltd.
13. Finolex Industries Ltd.
14. INA Bearings India Pvt Ltd.
15. Involute Technologies Pvt Ltd.
16. ISGEC Heavy Engineering Ltd.
17. Jaya Hind Industries Ltd.
18. JCB India Ltd.
19. Kalyani Technoforge Ltd.
20. Kirloskar Brothers Ltd.
21. KSB Pumps Ltd.
22. Larsen and Toubro group

23. Lokesh Machines Ltd.
24. Miven Mayfran Conveyors P. Ltd.
25. NRB Bearings Ltd.
26. Paranjape Autocast Ltd.
27. Rieter India Pvt. Ltd.
28. Saint Gobain Sekurit India Ltd.
29. Sandvik Asia Pvt. Ltd.
30. Sansera Engineering Pvt. Ltd.
31. Siemens Ltd.
32. SKF India Ltd.
33. Tata Cummins Ltd.
34. Thyssen Krupp Industries India Ltd.

## AUTO AND AUTO ANCILLARIES

1. Ashok Leyland Ltd.
2. Automotive Stampings & Assemblies Ltd.
3. Avtec Ltd.
4. Bajaj Auto Ltd.
5. Bosch Chassis Systems India Ltd.
6. Carraro India Ltd.
7. Endurance Technologies Group
8. Exide Industries Ltd.

9. Force Motors Ltd.
10. General Motors
11. Honda Cars India Ltd.
12. Honda Motorcycle & Scooter India Pvt. Ltd.
13. Hyundai Transys
14. John Deere India Pvt. Ltd.
15. Mahindra & Mahindra Ltd.
16. Mahindra CIE Automotive Ltd. – Group
17. Mahindra Heavy Engines (P) Ltd.
18. Mahindra Sona Ltd.
19. Mahindra Vehicle Mfg. Ltd.
20. Man Trucks India Pvt Ltd.
21. Maruti Suzuki India Ltd.
22. Mercedes Benz India Pvt. Ltd.
23. Piaggio Vehicles P. Ltd.
24. Premium Transmission Ltd.
25. RSB Transmissions India Ltd.
26. Spaco Carburettors India Ltd.
27. Tata Motors Ltd. (Complete Group)
28. Varroc group
29. VE Commercial Vehicles Ltd.
30. Volkswagen India Pvt Ltd.

31. ZF Steering Gear India Ltd.

## METALS

1. Arcelor Mittal Nippon Steel India Ltd. .
2. Bharat Aluminium Company Ltd
3. Bhushan Steel Ltd.
4. Hindalco Industries Ltd.
5. Jindal Stainless Ltd.
6. Kalyani Carpenter Special Steels Pvt. Ltd.

## PSU

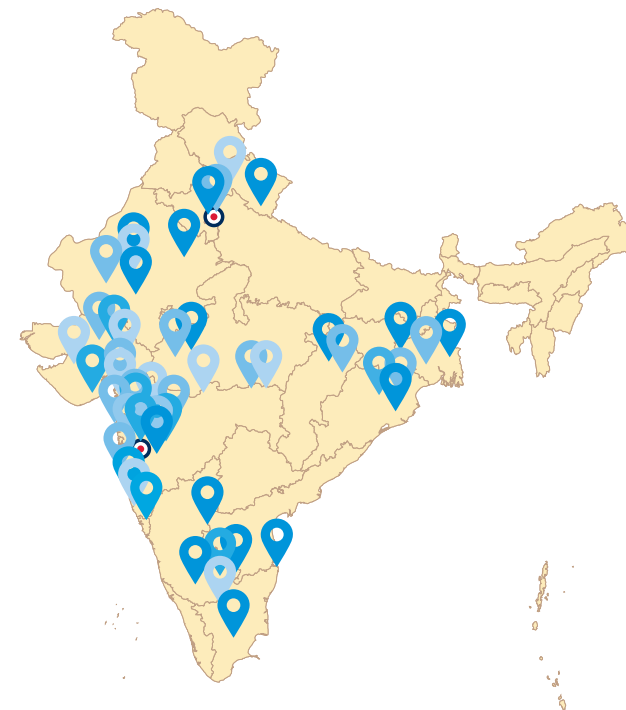
1. Bharat Heavy Electricals Ltd. (BHEL)
2. Bharat Earth Movers Ltd. (BEML)
3. Hindustan Aeronautics Ltd. (HAL)

## OEM

1. Clean Energy Systems
2. Kirloskar Chillers
3. Kirloskar Oil Engines Ltd.
4. Miven Mayfran
5. Span Associates
6. Veeraja

# THE REACH

From humble beginnings in 1987 with just 1 client, Panchsheel Filters is now a preferred partner for over 1,000 clients across 7 countries.



Germany



Korea



Vietnam



UAE



Uzbekistan



Qatar

# CLIENTS SPEAK



“Using Panchsheel’s Filters have resulted in impressive cost savings. We have been very happy with the results and quality.”

Force Motors Limited

“Panchsheel’s association with SKF India as “supplier partner” is over 3 decades old, which is a testimony of the strong business relationship we have in India. Panchsheel with its technical expertise have indigenised and replaced many critical imported filters over the last 30 years.”

SKF India Limited

“Over the years we have relied on Panchsheel Filters for our filtration needs. Panchsheel Filters is our “go to” vendor for any kind of filtration requirement. We are confident about the availability of filters, their ability to design and develop special filters when the need arises.”

Bharat Forge Ltd.

“Panchsheel Filters have consistently met our vendor parameters of quality, reasonable pricing, delivery consistency and reliability ensuring smooth operations without any hiccups and stoppage. They have been a reliable partner in our business and have delivered the desired results continuously and consistently”

Hindalco Industries Ltd.

# THE HEARTBEAT OF PANCHSHEEL





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