

COMPANY PROFILE



V-Tech MAINTENANCE & SERVICES

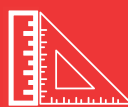
Contact No. : +91-9896988240, 8901313125



**BELT
ALIGNMENT**



**SHAFT
ALIGNMENT**



**GEOMETRY
ALIGNMENT**



**VIBRATION & BALANCING
ALIGNMENT**



About Us

Vtech Maintenance & Services has been a trusted leader in Shaft Alignment, Belt Alignment, and Geometrical Alignment Services. With 19 years of expertise, we specialize in laser-based alignment, delivering precise and tailored solutions under the leadership of Mr. Amit Kumar. Our advanced equipment and industry-wide service capabilities ensure the highest accuracy and efficiency. Committed to quality and customer satisfaction, we help clients optimize machinery performance, reduce maintenance costs, and benefit from cutting-edge technology backed by nearly two decades of experience.



Why Choose Us



**Consistent
Performance
& Innovation**



**Precision &
Accuracy**



**Compliance
With Industry
Standards**



**Durability &
Reliability**



VALUE DRIVEN



TRUSTED QUALITY



**EDGE OVER
COMPETITION**



**CUTTING-EDGE
TECHNOLOGY**



**HIGH
PERFORMANCE**



Our Vision

Our vision is to lead globally in precision alignment through innovation, expertise, and customer-focused solutions, ensuring superior accuracy, reliability, and efficiency.



Our Mission

Our goal is to provide precise, efficient alignment services that enhance performance, extend equipment life, and minimize downtime.





INDUSTRIES WE SERVE

We proudly serve a wide range of industries, including manufacturing, power plants, automotive, aerospace, oil & gas, pharmaceuticals, and more. Our precision alignment services ensure optimal machinery performance, reduced downtime, and enhanced efficiency across various sectors, helping businesses maintain high operational standards.



Oil & Gas Industry



Steel Plants



Paper Plant



Saw Mill



Shipping Industry



Chemical Plants



Plastic Plant



Power Plant



Automobile



Wind Power



Rubber Industry



Food Industry



LASER ALIGNMENT



SHAFT ALIGNMENT

Alignment ensures two or more rotating shafts have centrelines with no offset or angularity at the coupling point.



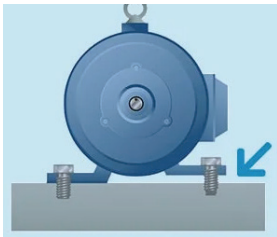
**Vertical Shaft
Laser Alignment**



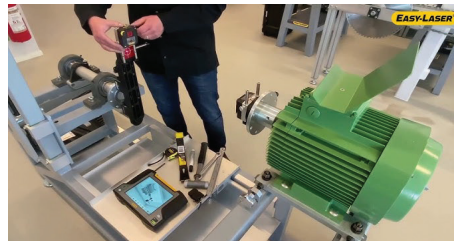
**Horizontal Shaft
Laser Alignment**



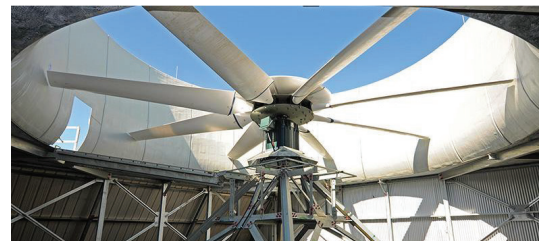
**Machine Train
Shaft Alignment**



**Soft
Foot**



**Cardan Shaft
Laser Alignment**



**Cooling Tower
Fan Alignment**

There Are Two Types of Misalignment

- Parallel misalignment occurs when shaft center lines are parallel but offset. Angular misalignment happens when shafts are at an angle to each other.
- Parallel misalignment includes horizontal (misalignment in the horizontal plane) and vertical (misalignment in the vertical plane). Angular misalignment occurs when shafts are at an angle to each other.

Importance of Shaft Alignment



**Enhances
Energy Efficiency**



**Reduces
Vibration and Noise**



**Minimizes Downtime
& Maintenance Costs**



**Prevents
Production Losses**



LASER ALIGNMENT



TORSION SHAFT LASER ALIGNMENT

Torsion Shaft Laser Alignment Up to 70% of vibration issues in machinery stem from misalignment, affecting pumps, motors, and other rotating equipment. Misaligned shafts waste energy, accelerate wear, and risk catastrophic failure. Proper alignment ensures optimal performance and extends equipment life.



Importance of Torsion Shaft Alignment



High Precision

Ensures accurate alignment compared to traditional methods.



Time Saving

Reduces downtime with quick and reliable results



Extended Equipment Life

Reduces wear on bearings, seals, and couplings.



Energy Efficiency

Decreases frictional losses and improves machine performance.

Torsion shaft laser alignment ensures precision, reduces wear, prevents failures, and enhances efficiency, saving time and maintenance costs.



BELT ALIGNMENT

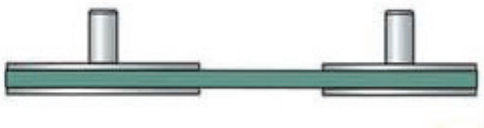
A common misconception is that pulleys aren't significantly affected by misalignment. This assumption means that energy companies are charging too much for their electricity. Several studies have shown how proper alignment can save up to 10% energy costs.

Correctly aligned machines mean significant improvements

- *Improved machine availability*
- *The increased service life for belts, pulleys, bearings, and other parts*
- *Less risk of overheats and secondary damage*
- *Lowering the noise level*
- *Less chance of severe damage*
- *A safer working environment*
- *With more significant overall savings, fewer spare parts, lower power consumption, and less unscheduled downtime.*



Belt Alignment is Crucial in Situations Where





GEOMETRICAL ALIGNMENT



LEVELLING

Levelling verifies height differences relative to a datum, commonly used in alignment, construction, and geodesy to ensure structural accuracy.



Importance of Leveling in Machinery Alignment



Prevents Misalignment

Ensures accurate shaft and belt alignment, reducing wear and tear.



Enhances Safety

Prevents unexpected failures and accidents in industrial settings.



Enhances Efficiency

Ensures smooth operation and optimal performance.



GEOMETRICAL ALIGNMENT



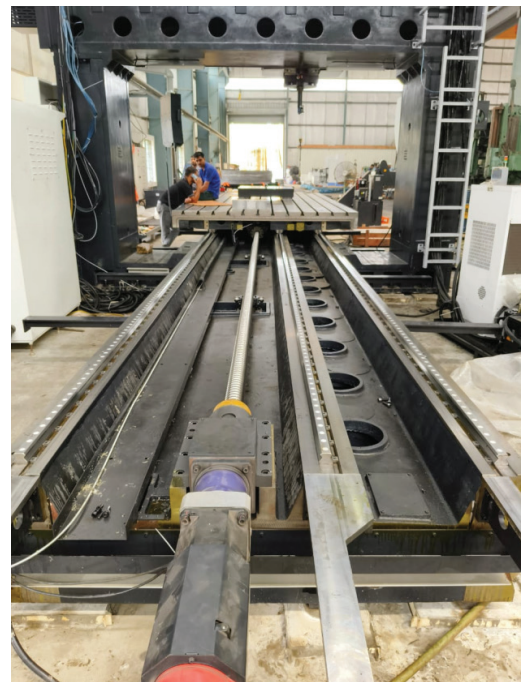
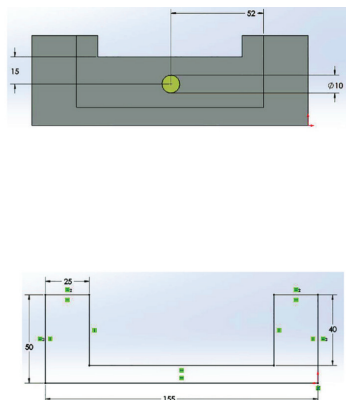
FLANGE FLATNESS

Flatness ensures a surface lies within two parallel planes, defining a tolerance zone. It applies to individual surfaces without a datum and is indicated by a feature control frame. All elements must lie in a single plane, defined by two parallel planes, without needing a datum. Flatness, when applied with a size parameter, targets the median plane of non-cylindrical surfaces



CNC Machine Bed Flatness

Machine Bed Flatness is a crucial factor affecting precision and performance in manufacturing. A laser alignment system is an advanced, accurate, and non-contact method to measure and correct flatness deviations.





GEOMETRICAL ALIGNMENT



Straightness of CNC Bed / Column

Straight surfaces are vital for accurate machining, ensuring precise tool movement in lathes or CNC machines. It is desirable that the tool moves during a straight path to obtain the perfect straightness and it is possible only when the guiding guideways are themselves straight. Line or plane is the basic unit of measurement for most methods of measurement.



Squareness / Right Angle

To measure squareness, use the D22 laser transmitter with prisms to deflect the beam 90°. Take reference measurements on the first object and record two measurements on the second. The system calculates angular deviation from 0°.





GEOMETRICAL ALIGNMENT



Roll Parallelism

Parallelism ensures surfaces or lines remain equidistant without gaps. Laser alignment provides a precise reference for fast, accurate on-site measurements, preventing breakdowns and enabling timely maintenance to reduce repair costs.

Roll parallelism is essential for industries using rollers, such as printing, paper, textile, and steel manufacturing. Proper alignment ensures uniform material processing and prevents uneven wear.

Problems Caused by Roll Misalignment



*Excessive
Vibration &
Noise*



*Higher
Rejection
Rate*



*Increased
Roller Wear
& Frequent
Maintenance*

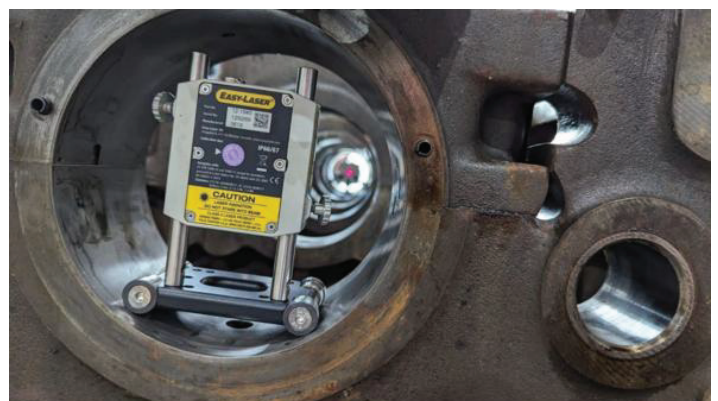


*Uneven Product
Thickness &
Material defects*



Bore Alignment

Bore alignment ensures a straight bore in the crankcase and cylinder block, making it a crucial step in engine machining and measurement.





GEOMETRICAL ALIGNMENT



Stacker Reclaimer Slew Bearing Leveling / Flatness



Turbine Alignment

Conventional methods of measuring wind turbines are very time-intensive. With a laser measurement device, work can be done much faster and with greater precision. The possibility of measuring results being easily and recorded is also a great advantage. Laser measurement systems optimize wind turbine maintenance with fast setup, precise alignment, and real-time results, surpassing traditional methods.



*Turbine
Blade
Alignment*



*Shaft /
Coupling
Alignment*



*Partition
Surface
Flatness*



*Diaphragm and
Bearing Journal
Straightness*



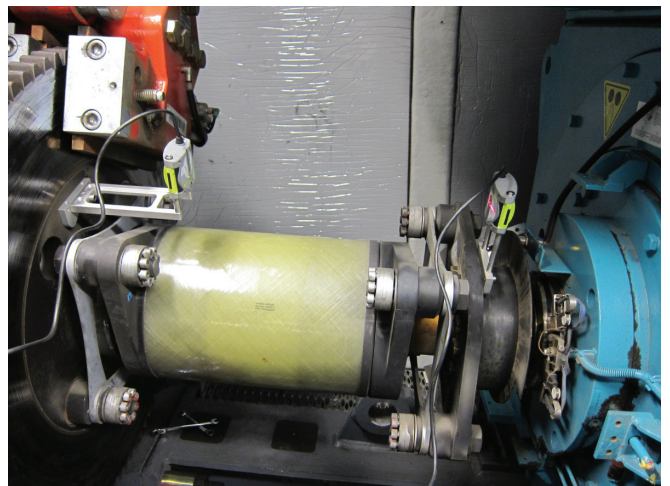


GEOMETRICAL ALIGNMENT



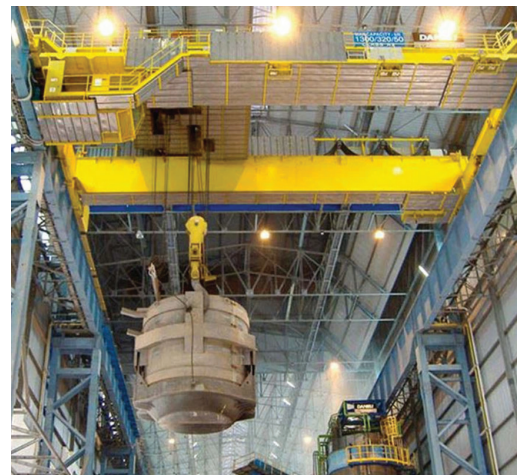
COOLING TOWER / WINDMILL MOTOR ALIGNMENT

Precision alignment of windmill / cooling tower motors is crucial for optimal performance, efficiency, and longevity. Using advanced laser alignment equipment ensures accurate positioning of the motor shaft with minimal misalignment, reducing vibration, energy losses, and mechanical wear.



EOT CRANE ALIGNMENT

EOT Crane Alignment with Laser Equipment Ensuring precise alignment of EOT (Electric Overhead Travelling) cranes is crucial for optimal performance, safety, and longevity. Our advanced laser alignment equipment enables accurate measurement and correction of misalignments in crane rails, gantries, and wheels.



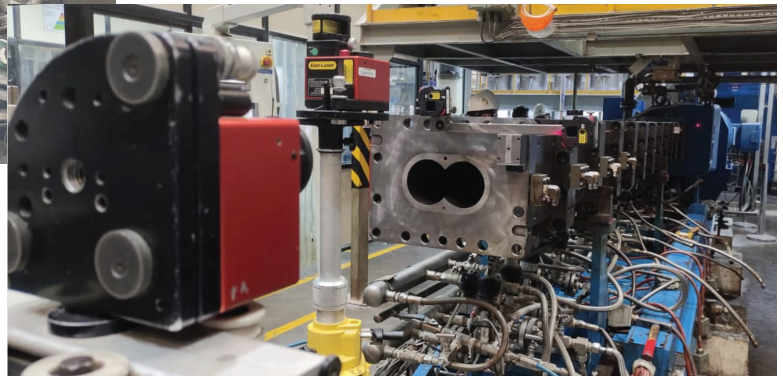


GEOMETRICAL ALIGNMENT



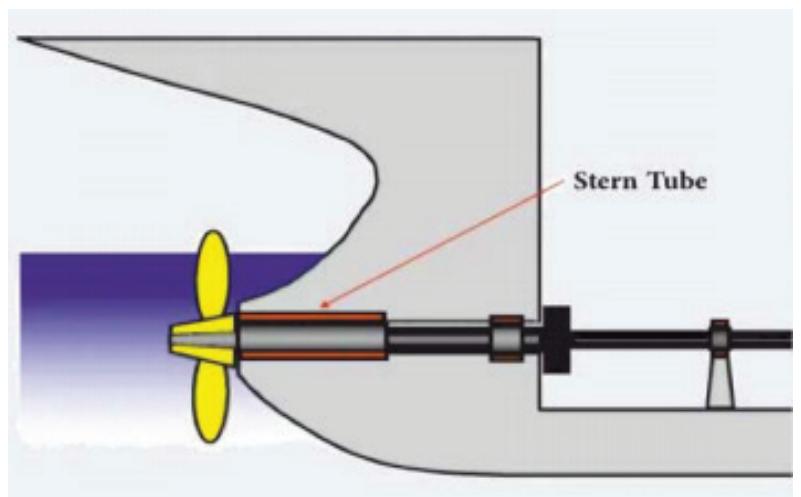
Extruder Barrel Alignment

Extruder barrel alignment ensures the barrel and screw are precisely aligned to prevent wear, improve efficiency, and maintain product quality in extrusion processes.



Ship Alignment / Alignment of the Propeller Shaft & Gearbox

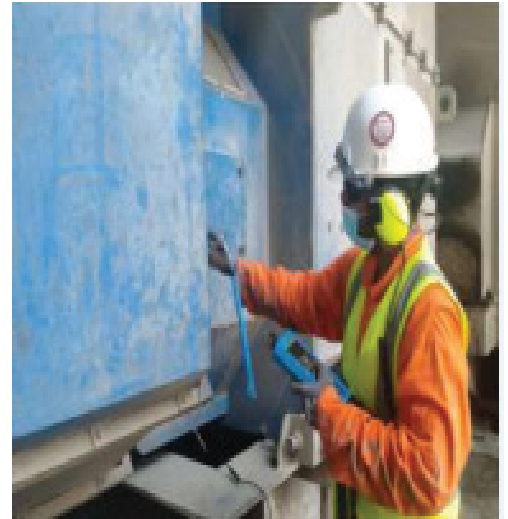
Drive shaft and machine alignment is performed using a laser alignment device mounted on both sides of the coupling, with tools secured by chain brackets, magnets, or a motor flywheel.





VIBRATION ANALYSIS & DYNAMIC BALANCING

Unwanted vibrations in rotating machinery can lead to inefficiencies, premature failures, and costly downtime. Our vibration analysis and dynamic balancing services help identify and correct imbalances, misalignments and mechanical faults in motors, fans, pumps and other rotating equipment. Using advanced diagnostic tools, we ensure smooth operation, reduced wear and extended equipment lifespan.



PRE CUT S.S SHIMS / SHEETS

Our Shims made of selected materials suitable for use as shims. Thickness of all shims is controlled to be as close as specified; with high hardness and springness to reduce any possibilities of thickness change in use.

- Specifications: 0.01mmThk To 5 mm Thk
- Width: -5mm To 500mm
- Length: - Coil Form
- Minimum Order Quantity: 10 Kilogram
- Grades Available 304, 304L, 304H, 309S, 309H, 310S, 310H, 316, 316H, 316L, 316 TI, 317, 317L, 321, 321 H, 347, 347 H, 409, 410, 4105, 430.

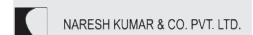


Our Valuable Customers

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TATA STEEL



& Many More

CONNECT WITH US

All INDIA Presence

V-Tech Maintenance Solutions & Services operates across all states in India, providing reliable services and effective solutions for various industries. Our goal is to ensure smooth operations with quality maintenance support.



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