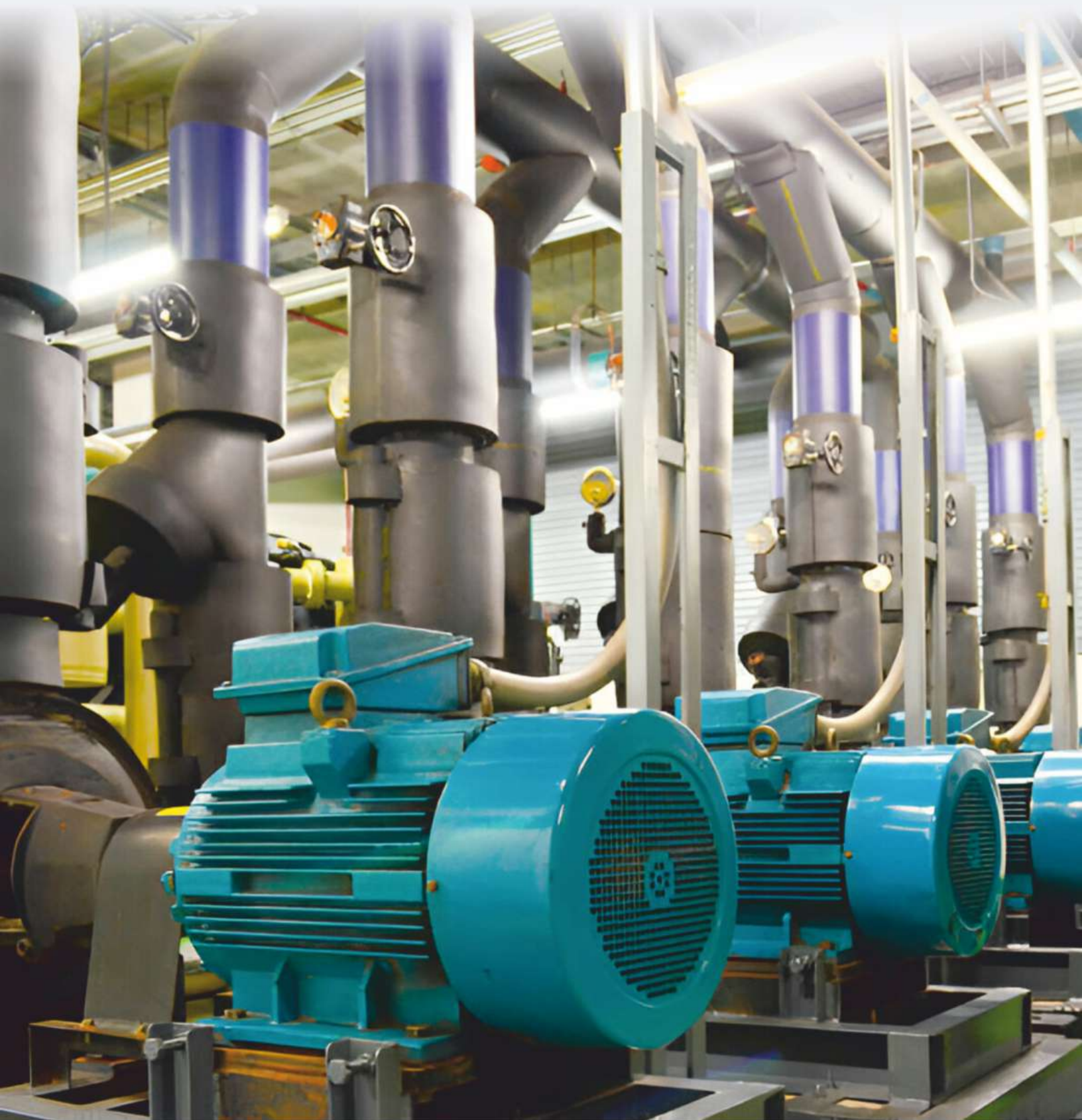




# LASERTECH

## SOLUTION & SERVICES

*Precision Alignment Solutions Since 2012*



## ABOUT US

Established in 2012 in Yamuna Nagar, Haryana, lasertech solution & services is a leading provider of Shaft alignment, Belt alignment, and Geometrical alignments. Under the leadership of Mr. Mohit Tyagi, our Firm excels in Laser-Based Alignment and Condition Monitoring services, ensuring precise and reliable solutions across various industries.



## OUR MISSION

To provide accurate, efficient, and reliable alignment services, ensuring optimal machinery performance and reduced downtime.

## OUR VISION

To be the global leader in precision alignment, setting industry standards with innovation, expertise, and customer-centric solutions.

## INDUSTRY WE SERVED

• Oil & Gas

• Wind Power

• Power Plant

• Cement Plants

• Pulp & Paper

• Automobile

• Steel Plant

• Ship Industry

• Chemical Plant



# SHAFT ALIGNMENT

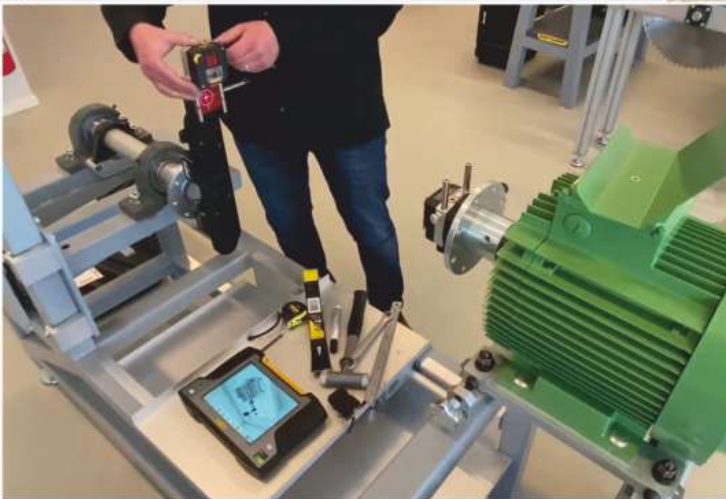
Alignment ensures two or more rotating shafts have centrelines with no offset or angularity at the coupling point.

Vertical Shaft Laser Alignment



Horizontal Shaft Laser Alignment

Cardan Shaft Laser Alignment



Machine Train Shaft Alignment

Cooling Tower Fan Alignment



Soft Foot

# 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.



## 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.



# GEOMETRICAL ALIGNMENT

## Levelling

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



## 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

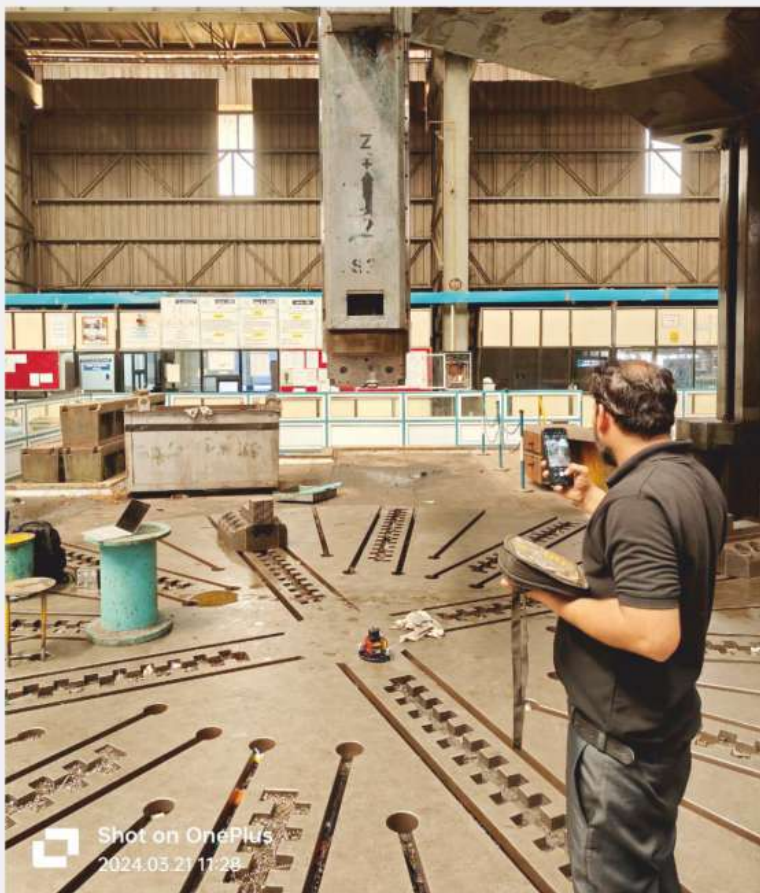
Machine Bed Flatness is a crucial factor affecting precision and performance in manufacturing. A laser alignment system is an advanced, accurate, and non-contact method to measure and correct flatness deviations.



Straight surfaces are vital for accurate machining, ensuring precise tool movement in lathes or CNC machines.

## Straightness of CNC Bed / Column

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  $90^\circ$ . Take reference measurements on the first object and record two measurements on the second. The system calculates angular deviation from  $0^\circ$ .



## 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

- Uneven product thickness and material defects
- Increased roller wear and frequent maintenance
- Higher rejection rates in production
- Excessive vibration and noise



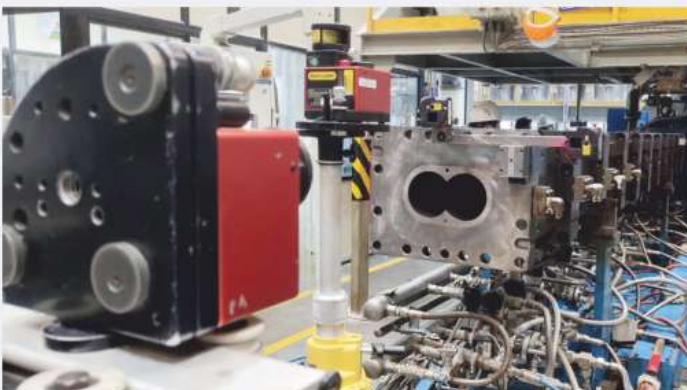
## Bore Alignment

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



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

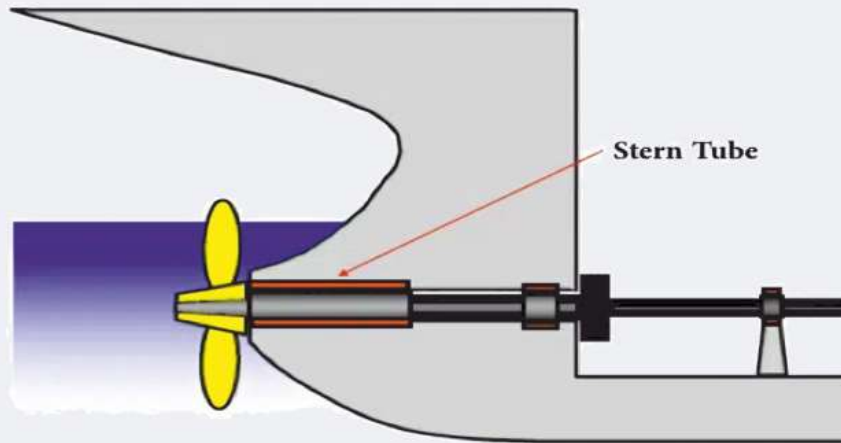
## Extruder Barrel Alignment





## Alignment of the Propeller Shaft and 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.



## 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.

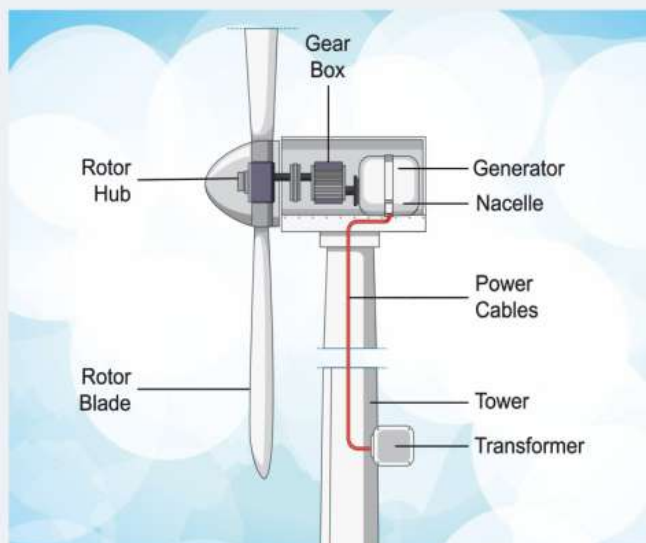
Laser measurement systems optimize wind turbine maintenance with fast setup, precise alignment, and real-time results, surpassing traditional methods.

- Turbine Blade Alignment
- Shaft/Coupling Alignment
- Diaphragm and Bearing Journal Straightness
- Partition Surface Flatness



## 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.



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



adani



Reliance Industries Limited



TATA STEEL WeAlsoMakeTomorrow

AM/NS INDIA ArcelorMittal Nippon Steel India

Ambuja Cement Giant Compressive Strength

UltraTech CEMENT



SMS group

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maxismotion

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VVR ENGG. WORKS

SKF

AHLSTROM MUNKSJÖ

BCL Industries Limited



FAIR Fair Exports (India) Pvt. Ltd.

Goltens

ROKADE ROKADE RoTak India Pvt. Ltd.



Pro-Tech

KRASNY



INDO TECH

IndiGrid

CPG CHANDERPUR GROUP

JKCement

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LASERTECH SOLUTION & SERVICES

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Precision Alignment Solutions Since 2012

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