



MUSANNA

TECHNICAL (PRIVATE) LIMITED

REBUILD • REPAIR • RENEW

DEFINING A LEGACY OF EXCELLENCE AND TRUST

**CENTRAL ENGINEERING COMPLEX
RAWALPINDI, PAKISTAN**

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MUSANNA
TECHNICAL (PRIVATE) LIMITED

MRO

MAINTENANCE REPAIR OVERHAUL

SUPPORT

Redefining Possibilities...

**Professional Expertise: Offering Comprehensive
Technical Solutions**

Led by **1500+** technical experts, upholding the legacy of **140-years** of excellence

Largest **MRO** Facility

CENTRAL ENGINEERING COMPLEX



MUSANNA
TECHNICAL (PRIVATE) LIMITED

**WELCOME
TO A
TRUSTED
NAME IN
TECHNICAL
EXCELLENCE**

ABOUT US

MUSANNA Technical (Pvt) Ltd, a subsidiary of MUSANNA LOGISTICS & TECHNICAL, was founded to harness public-domain technical assets and deliver cutting-edge services to industries and partners worldwide. Backed by over 50 years of expertise in leasing life to End-of-Life (EOL) Equipment and supporting obsolescent equipment through in-house parts manufacturing — particularly within the defense sector. Supported by a skilled workforce of more than 10,000 professionals, the company offers specialized capabilities across various domains specially in US, European and Chinese origin equipment. Our aim is to leverage this exceptional infrastructure and talent pool to provide dependable, high-quality and cost-efficient solutions to both local and global partners by integrating best practices within government and commercial industries.



OUR MISSION

Provide state of the art Maintenance, Repair and Overhaul (MRO) services in order to enhance the life of variety of age-diversified equipment by ensuring its operational worthiness and reduced downtime.



MRO *Support* FACILITY

ENGINEERING TRUST AND DELIVERING EXCELLENCE



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MUSANNA
TECHNICAL (PRIVATE) LIMITED

**DOMINATING
RANGE
DELIVERING
VICTORY**



600+

Artillery Guns overhauled
in past 10 years



ASSURANCE

System specific test benches
to ensure repair quality



EXPERTS

100+ equipment specific
specialized HR



MUSANNA
TECHNICAL (PRIVATE) LIMITED

ARMAMENT

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FACILITY

ARMAMENT Repair Services

- ➔ The most expert **MRO** service provider in Pakistan for **Artillery** and **Air Defence Guns** for nearly **60 years** as per **ISO quality standards** and **OEM systems tests**
- ➔ Capable of overhauling wide range of **calibers** from **35 mm to 155 mm**
- ➔ Handling **more than 100 End-of-Life equipment** in **one year** with highly skilled manpower of **more than 100 technicians** with dedicated core expertise in armament and weapon systems
- ➔ In last 5 years, **400+ Artillery & Air Defence Guns** have been rebuild enhancing lease of life for another **7 years**



AIR DEFENSE GUNS

- ➔ Capable of carrying out overhaul and **onsite** repair of more than **80 Air Defence Guns** including
 - 35 mm Oerlikon Gun
 - 37 mm Anti Aircraft Guns
 - 57 mm Anti Aircraft Guns



SYSTEM TESTS Services

- ➔ System Test Bench
- ➔ Periscope Test Bench
- ➔ Thyristor Tester
- ➔ Reload Tester
- ➔ Breech Block buffer Tester



ARTILLERY GUNS Repair Services

- ➔ We are enabled to carry out **Depot Level (D-level) repair** and **overhaul** of diverse range of artillery guns classified into **Field, Medium** and **Heavy Artillery Guns**
- ➔ Providing special expertise in following **recoil system** being equipped with latest tools
 - Recuperator System
 - Counter Recoil System
 - Buffer System

ARTILLERY GUNS System Testing Services

- ➔ Brake Testing System
- ➔ Hydraulic Pump Tester
- ➔ Barrel cleaning
- ➔ Chamber polishing
- ➔ Broaching
- ➔ Air filling system

HEAVY ARTILLERY GUN



8" Howitzer



155 mm Gun M2

MEDIUM TOWED ARTILLERY GUN



155 mm Howitzer M114

130 mm T59



130 mm M46

155 mm Howitzer M198

FIELD ARTILLERY GUN



25 Pounder Gun

122 mm Howitzer M2A1



122 mm Howitzer T54-59

122 mm Howitzer D-30



MUSANNA
TECHNICAL (PRIVATE) LIMITED

BUILDING & SUSTAINING ARMY READINESS



80+
Legacy and EOL equipment
overhauled annually by
providing **10 years lease
of life**



EXPERTS
400+ equipment specific
trained specialized HR



END OF LIFE CENTRE
Dedicated service provider for
resourcing and **relieving** critical
assemblies



MUSANNA
TECHNICAL (PRIVATE) LIMITED

TRACKED VEHICLES



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FACILITY



TRACKED VEHICLES

TRACKED VEHICLE

Repair Services

- ➔ Configured with **more than 400 skilled** technical HR to provide **deep level** maintenance and overhaul service to more than **1500 Armoured / Tracked vehicles** of Pakistan Armed Forces including **M109A2-A5 Self Propelled Medium Artillery Guns, M110 Self Propelled Heavy Artillery Guns, M113 Armoured Personal Carriers, M88 Armoured Recovery Vehicles** and **M47 Armoured Vehicle Launched Bridges**
- ➔ It is specialized in increasing the lifespan of aging equipment beyond its life by indigenously developed obsolete spare parts with minimum OEM support

EOL RESOURCE

Centre

- ➔ A **dedicated** service providing center established to **repair** and **overhaul critically required assemblies** of **legacy** equipment of Pakistan Army through **indigenously** in-house manufactured spare parts for **future sustenance** of vintage equipment. The center offers following services in order to build up stock for vintage equipment having discontinued OEM support
 - Hydraulic fuel pumps
 - Harness manufacturing
 - Rebuilding of engine accessories
 - Rebuilding of APUs and Cross Drives



OVER-HAUL CAPABILITIES

- ➔ The workshop is configured to carry **overhaul** of more than **80 tracked vehicles** including **M109-A2/A5 & M110 SP Medium Artillery Guns, M113 APCs, M47 AVLB** and **over 10+ M88 Armoured Recovery Vehicles** annually
- ➔ All repair services are tested and checked on designated **test benches** including **engine, transmission, power packs** and **hydraulic systems**
- ➔ All repairs are conformed to quality control and Integrated Management System (IMS) with assured process **economy** and **standards**



M110-A5 MEDIUM ARTILLERY GUN



M109-A2 MEDIUM ARTILLERY GUN



APC M113



M88 ARMoured RECOVERY VEHICLE



M47M AVLB



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ENABLERS OF DEFENDERS



LEASE OF LIFE

Ensuring optimum operationality
of weapons for **more than 8 years**



POTENTIAL

15000+ weapons being
overhauled **per year**



CAPABILITIES

Carrying-out **overhauling, testing**
and **modification** of weapons



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SMALL ARMS

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SMALL ARMS Services

- ➔ **Established in 1913**, it is providing **MRO Services** to **Pakistan Army** and other **Law Enforcement Agencies** till date
- ➔ Services provided are essential for ensuring the operational readiness and safety of firearms used by **military, law enforcement agencies** and **security personnel**
- ➔ Configured to provide dedicated **maintenance, repair**, and limited **modification** of **small arms** such as **pistols, rifles, submachine guns, light machine guns** and related equipment
- ➔ It also deals with all types of **heavy infantry weapons** and **mortars** used by **Pakistan Armed Forces**
- ➔ Facility is capable of **handling 30,000 weapons** per year while **enhancing life** of weapons to further **8 years**

INVENTORY Overview



CAPABILITIES

- ➔ **Routine Maintenance**
Cleaning, lubrication and oxidation of weapons
- ➔ **Component Replacement**
Replacement of worn out parts
- ➔ **Functional Testing**
Dry cycling, trigger pull measurement and short range firing tests
- ➔ **Fabrication**
Bridging gaps in supply chain management
- ➔ **Upgrades and Modifications**
Addition of optics, rails and ergonomic enhancements (within scope)



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50+

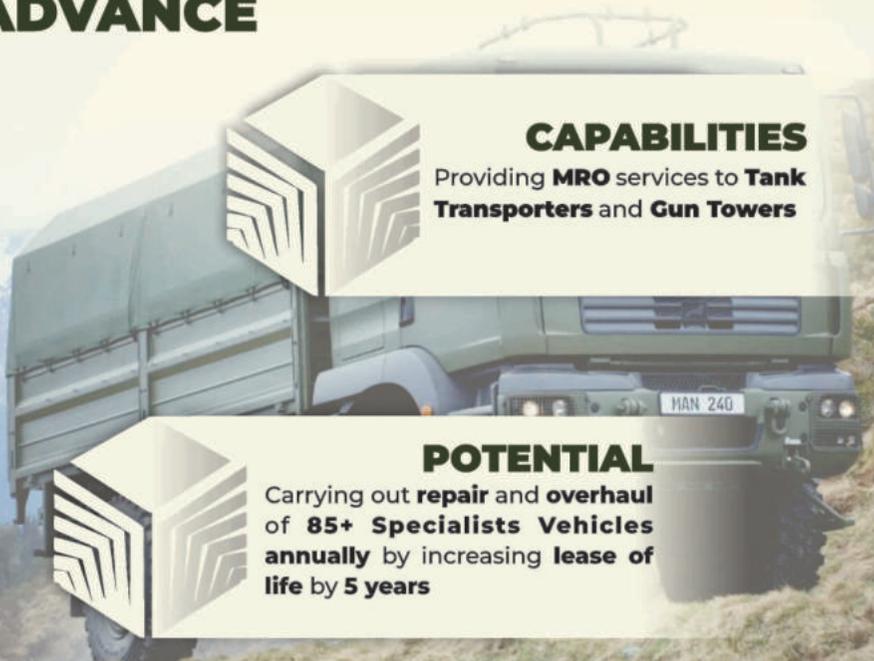
OEM trained HR with more than **20+ years of hands-on** experience in **overhauling**

CATALYZING THE THRUST OF ADVANCE



CAPABILITIES

Providing **MRO** services to **Tank Transporters** and **Gun Towers**



POTENTIAL

Carrying out **repair** and **overhaul** of **85+ Specialists Vehicles** annually by increasing **lease of life** by **5 years**



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SPECIALIST VEHICLES



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TANK TRANSPORTER Repair Services

- ➔ Configured to carry out **overhaul** of **four types** of **Mercedes Benz tank transporters** with an average of **rebuilding 20 vehicles** annually
- ➔ **OEM trained HR** capable of executing **special overhaul projects on-site** whenever required
- ➔ Due to indigenous spares production, reliance on OEM is reduced while **60% reduction in repair cost**



GUN TOWER Repair Services

- ➔ Enabled to perform D-Level repairs of **Mercedes Benz, Styer** and **MAN** trucks with an average of **rebuilding 20 vehicles** annually
- ➔ It is managed by **OEM trained technicians** for ensuring optimum level of repair as per **ISO standards**
- ➔ With the help of in-house resource center and local partners, reliance on OEM is reduced while **70% reduction in repair cost**



SPECIALIST VEHICLE Repair Services

- ➔ Established to provide **Depot Level (D - Level) maintenance and overhaul services** to more than **40** different make and types of specialized vehicles which includes **Tank Transporters** and **Gun Towers**
- ➔ Beyond OEM limitations, we breathe new life into aging equipment. Our specialized, indigenously developed spare parts overcome obsolescence, consistently extending asset's lifespan by crucial **5 operational years**



ASSEMBLY & REPAIR Services

- ➔ Engine Overhaul & Rebuild
- ➔ Transmission / Gearbox Repair
- ➔ Hydraulic Pump
- ➔ Brake & Pneumatic System
- ➔ Undercarriage
- ➔ Electrical Components
- ➔ Fuel Injection Pump

DIAGNOSTIC & TESTING Capabilities

- ➔ Engine Test Bench
- ➔ OBD Scanners
- ➔ Hydraulic Test Bench
- ➔ Fuel Injection Pump Test Bench



BRIDGING BATTLEFIELDS



50+

OEM trained HR with more than **20 years of** hands-on experience in **overhauling**



CAPABILITIES

Providing **MRO** services and Leasing Life of Bridging and Plant Machinery Equipment



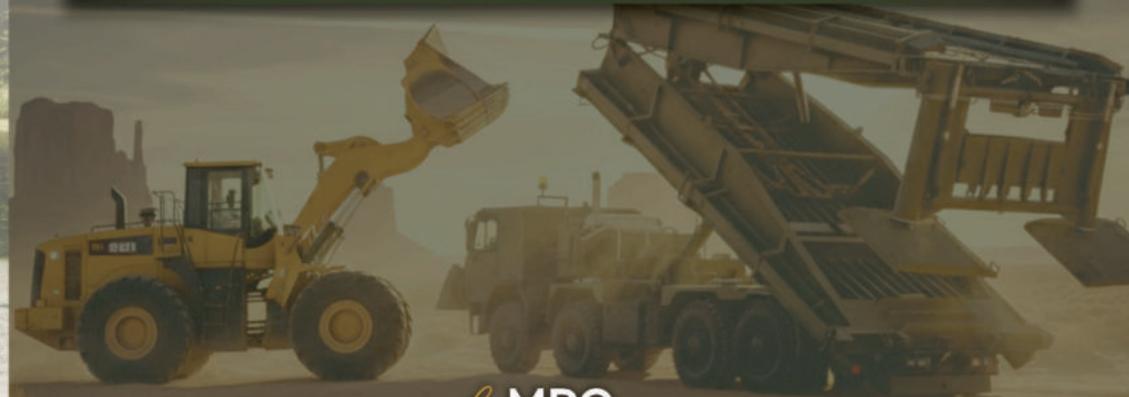
POTENTIAL

Carrying out **repair** and **overhaul** of **30+ Bridging and Plant Machinery Equipment**



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BRIDGING AND PLANT MACHINERY EQUIPMENT



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OVER-HAUL CAPABILITIES

AM-50 TATRA & TMSC HMB Overhaul Services

- ➔ Capable to execute **complete over-haul** of **more than 10 AM-50 TATRA Bridges** and **15+ TMSC Heavy Mechanized Bridges** annually including its trestle assembly and under-carriages
- ➔ Enabled to carry-out **overhaul of major assemblies including engine, transmission and hydraulic systems** assisted by **indigenously manufactured** parts by **increasing cost effectiveness** by **30%**



TMSC HEAVY MECHANIZED BRIDGE

AM-50 TATRA BRIDGES

CONSTRUCTION PLANT EQUIPMENT Repair Services

- ➔ Designed to perform **D-Level repairs** of **15 types** of **Construction Plant Equipment** which include **Dozers, Graders, FE Loader, Fork Lifters** and **Excavators** with an average of **20 vehicles rebuilding** capacity annually
- ➔ Work force of **15 OEM trained individuals** carrying out repairs on **ISO standards**
- ➔ **Reducing** repair **cost** by **60%** through resourcing and rebuilding of parts indigenously which are discontinued by **OEM** and foreign / local markets





MUSANNA
TECHNICAL (PRIVATE) LIMITED

SEAMLESS & SECURED COMMUNICATION



130+

Skilled HR trained as per **OEM** repair standards and services



CAPABILITIES

Providing **MRO** services to **Communication & Jamming equipment, Explosive Detectors** and **IT Simulators**



POTENTIAL

Carrying out repair and overhaul of **4500+ Legacy equipment** and **1000+ Hi-tech** communication sets



MUSANNA
TECHNICAL (PRIVATE) LIMITED

COMMUNICATION, SECURITY & ELECTRICAL EQUIPMENT

MRO
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FACILITY

ELECTRICAL AND SECURITY EQUIPMENT

Repair Services

➔ Specialized in providing **Repair and Maintenance services** in **Communication, Security** and **Electronics Equipment**. With over **130 skilled manpower**, the services provided include

- Diagnostic Testing
- Software Support
- Modular / Component Level Repair
- Rebuild / Overhaul
- Maintenance Programs
- Trainings



COMMUNICATION EQUIPMENT

➔ Capable of providing **MRO facility** to **communication equipment** including **HARRIS®** and other renowned manufacturers with **yearly capacity** of

- **Software Defined Radio - 1500** (sets along with accessories)
- **Legacy communication Equipment - 4500**
- **Line & Electrical Equipment - 900**

➔ **MRO Services** are provided in different variants including

- Software Defined Radios
- Land Mobile Radios
- Vehicular Radio sets
- Telephone sets & Exchanges
- Battery chargers of RDMS & MBRL



JAMMING & EXPLOSIVE EQUIPMENT

Repair Services

➔ Our state-of-the-art **explosive, jamming** and **detecting equipment repair services** are enabled with system qualified technicians and trained on OEM repair methodology. It is specialized in repairing and re-lifing of following equipment with yearly output of **1300 equipment**

- Wide Band Jammer
- Manpack Jammer
- Mine Detector
- Explosive Detector
- IED Detector
- CCTV Cammers
- Walk Through Gates & Scanners



IT EQUIPMENT & SIMULATORS

Repair Services

➔ Capable to carry out repair of more than **1250 IT equipment** as per **OEM standards** including **firing simulators**, **IT equipment** and providing **software update** and **trouble shooting service** via dedicated setup





MUSANNA
TECHNICAL (PRIVATE) LIMITED

REDUCING EQUIPMENT DOWNTIME



40+

Skilled HR with more than **30 years** of hands-on experience in overhauling



CAPABILITIES

Extending on site **MRO services** to **90+** hospitals across the country with **OEM qualified HR**



POTENTIAL

Providing services for **Low, Med and Hi -tech medical equipment**



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ELECTRO MEDICAL EQUIPMENT

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HI-TECH ELECTROMEDICAL EQUIPMENT

Repair Services

- ➔ Enabled to provide **repair, calibration, maintenance and overhaul services** to more than **90 hospitals** including **25000+ Electromedical Equipment**
- ➔ More than **1800 hi-tech equipment** including **CT Scans, MRI Machine, X-rays / CR / DR, USG and Mammography / Dexa scans and Fluoroscopy Machine**
- ➔ **75-80 %** of repairs are carried out **on site** and portable equipment which are beyond repair at site, are brought in to the facility for repair
- ➔ We are the only service provider extending **one-window solution** to the hospitals across whole country consisting of **3 Centres of Excellence Repair Facility of Hi-tech Equipment** and **Regional Repair Facilities**

CT - SCANNER



ULTRA SOUND MACHINE



C-ARM MACHINE



MEDIUM / LOW TECH ELECTROMEDICAL EQUIPMENT

Repair Services

- ➔ More than **2300 med / low tech equipment** including **anesthesia machines, ventilators, Electromyographs, OT table, blood banks, cardiac monitors, ECGs and pulse oximeters** are repaired by our HR
- ➔ **50-60 %** of repairs are carried out on-site and portable equipment which are beyond repair at site are repaired in-house
- ➔ **Regional Repair facilities** are extended through out the country to carry out repairs and calibration of above mentioned equipment





MUSANNA
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300+

Skilled HR with more than **30 years** of hands-on experience in **manufacturing** and **designing**

EMPOWERING SELF-RELIANCE



CAPABILITIES

Hallmark of **indigenization** and **In-House Manufacturing** of **Spares** and **Superstructures**



POTENTIAL

State of the art **150+** fabrication, design and precision cutting machines



MUSANNA
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MANUFACTURING & SUPERSTRUCTURES SOLUTIONS

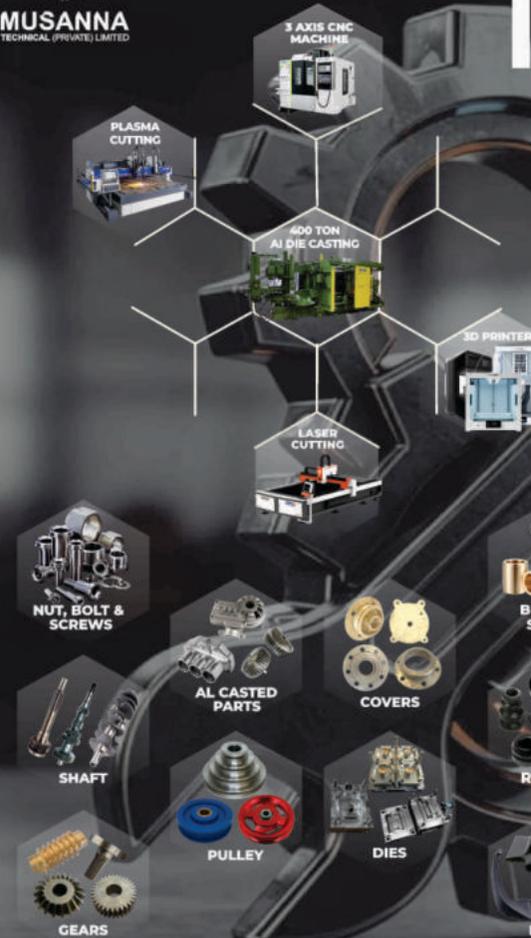


MRO
Support
FACILITY

OUR SERVICES

- ➔ Professionally manufactured and precisely engineered, durable solutions
- ➔ Basic to complex with quality ensured metal, fiber, rubber and variety of spares fabrication

- Precise measurement (upto 2 microns)
- Laser cutting of metal sheets (upto 12 mm)
- Plasma cutting of metal sheets (upto 24 mm)
- Sand Casting of Aluminum, Brass and Mild Steel
- Die casting of Aluminum
- Welding (including TIG & MIG)
- All types of paints (including powder coating)
- 3D laser scanning and reverse engineering (up to 30 microns)
- Rapid prototyping of 3D laser scanned parts (250 x 250 mm)



SUPERSTRUCTURE SOLUTIONS

WATER BOWZER



- ➔ **Qualified and expert** in fabrication of super structures while extending our services all over the country

MOBILE CONTAINERIZED VEHICLE



- ➔ Modifying a wide range of equipment to meet user's customized requirements, ensuring enhanced performance and reliability

MOBILE WORKSHOP



- ➔ In the quest of operational excellence, the production house is **ISO (9001, 14001, 45001) and Lean Integrated Management System (LIMS) certified**; aiming to deliver products that meet international quality standards

TENDER FIRE CRASH



- ➔ We deliver **high quality products** tailored to meet **user needs** with unmatched precision and standards

TENDER FIRE PUMP





MUSANNA
TECHNICAL (PRIVATE) LIMITED

TESTING STRENGTH & CAPABILITIES



SKILLS

HR qualified in carrying out precise **testing** and calibration meeting optimum **standards**



CAPABILITIES

Quality assurance and **calibrating** equipment ensuring **reliability**



POTENTIAL

Enabled to meet **any kind of customer's testing** and equipment calibration



MUSANNA
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MATERIAL TESTING & CALIBRATION



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MATERIAL TESTING & CALIBRATION

Laboratory

➔ At **Material Testing and calibration Lab**, we specialize in delivering high precision, Pakistan National Accreditation Council (PNAC) accredited **material testing** and **calibration services** designed to meet the highest standard of quality and reliability

➔ With a team of **skilled professionals** and advance laboratory infrastructure, we provide a wide range of testing capabilities

➔ Our **core services** include

- Hardness testing
- Metal composition of metal alloys
- Viscosity of different fluids
- Tensile strength & bending test of metal alloys
- Sure hardness test of rubbers
- Crack and flaw detection and thickness measurements of materials
- Detailed micro structure analysis of metallic samples
- Percentage purity test of chemicals



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