



LASER TECH
SYSTEMS AND SOLUTIONS

SERVICE BEFORE SALES

QuickWeld Series

Handheld Laser Welding Machine

COMPANY PROFILE:

Laser Tech Systems and Solutions was founded by Mr. Rajiv Kumar with a group of Technocrats in 2021, with the idea of creating a large umbrella organization to assist and serve the growing Indian Laser Industry and to help the market with its years of experience in the field of Lasers and its applications.

We represent many global manufactures, covering a wide range of solutions Laser Marking, Laser Welding, 2D Laser Cutting, 3D Laser Cutting, Laser Cladding, Laser Hardening. Our Laser Solutions can process a wide range of materials like Metal, Paper, Acrylic, Wood, Textile, Leather, Plastic and many more.

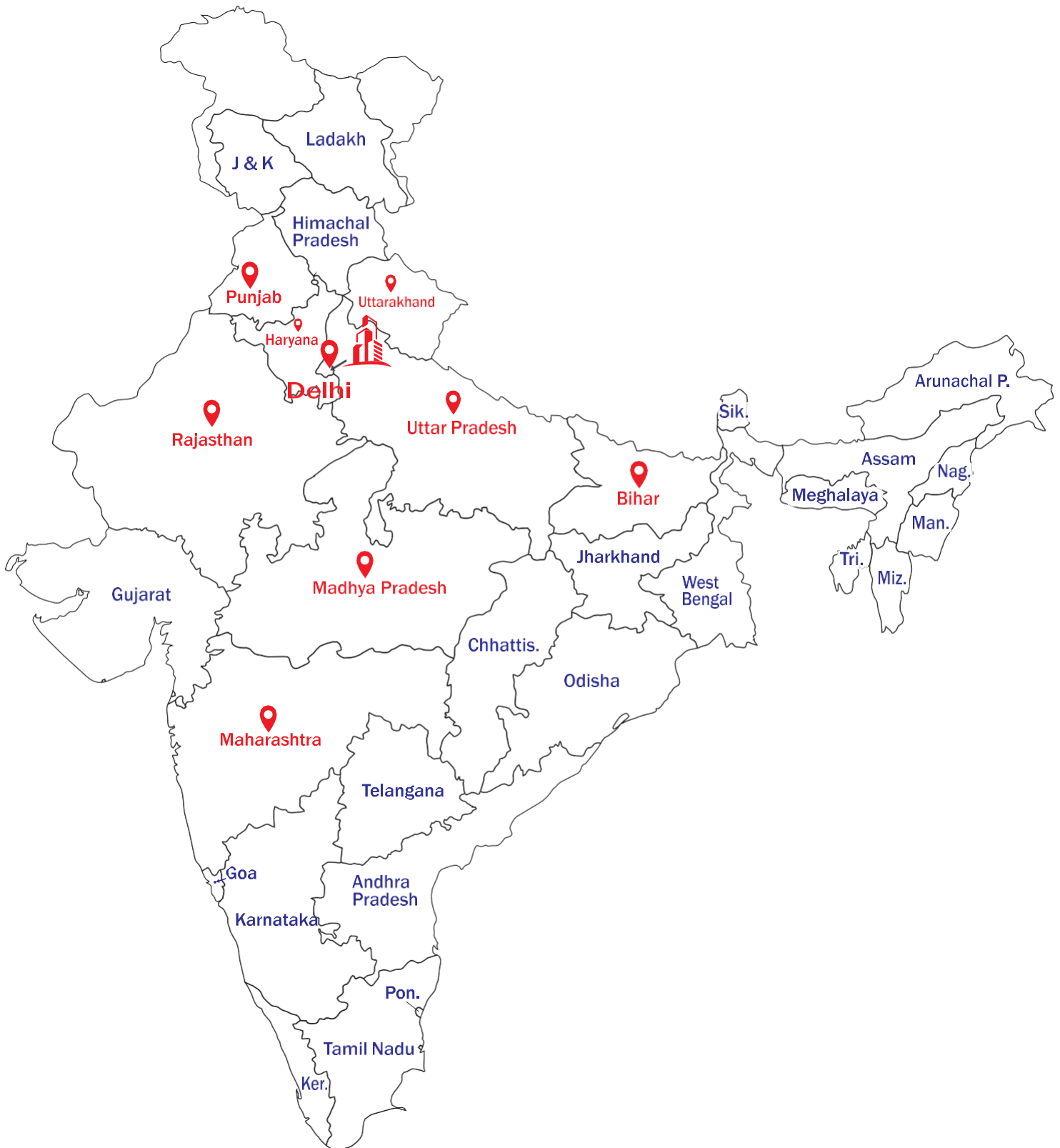
Our main aim is to serve our customers with cost effective and innovative solutions with our utmost know how of Applications and help them to fulfill their objectives.

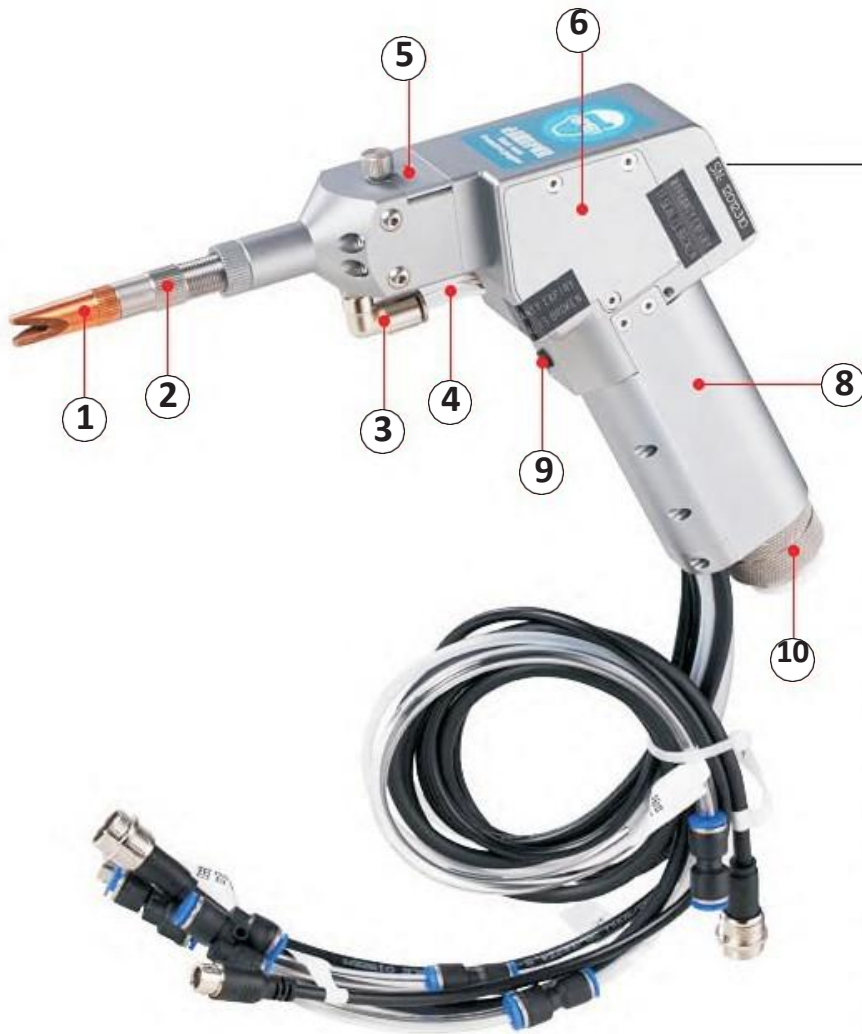
Our aim is to provide the best solutions to all our customers with best systems and economical prices. We believe in **SERVICE BEFORE SALES**...We provide industrial solutions for Laser for Metals, non-metal laser cutting/engraving machines, Galvo based solutions, Laser Marking, Laser welding, 2D laser cutting, 3D laser cutting, Laser cladding etc.

LTSS Service and Support:

Laser Tech Systems and Solutions supports installation, commissioning, and training for its customers. Dedicated Laser Systems available for in-house demonstration, applications and software training. Specialized engineers are available to provide online and telephonic support.

*We proudly say that because of our team's dedicated efforts and our motto "**SERVICE BEFORE SALES**" we have a chain of happy customers related to various industries using our Laser machines in India.*





- ① Adjust Focus Distance Nozzle
- ② Screw thread steel pipe
- ③ Gas pipe connection
- ④ Turn on the signal line
- ⑤ Protective lens mounting port
- ⑥ Circulating water circuit
- ⑦ Liquid crystal display
- ⑧ Handle
- ⑨ Button
- ⑩ QBH Connector



Welding Gun



Control Card



Wire Feeder

It's easy to operate even for unskilled operator wobble technology; weld without deformation

MACHINE DESCRIPTION:

QuickWeld Handheld laser welding machine adopts the latest generation of fiber laser and is equipped with a self-developed wobble welding head. It fills the blank of handheld welding in the laser machinery industry. It has the advantages of simple operation, beautiful welds, fast welding speed, and no consumables. For welding thin stainless-steel plates, iron plates, galvanized plates and other metal materials, it can perfectly replace traditional argon arc welding, electric welding and other processes. The handheld laser welding machine can be widely used in the complicated and irregular welding processes of cabinets, kitchens and bathrooms, stair elevators, shelves, ovens, stainless steel door and window guardrails, power distribution boxes, stainless steel home appliances and other industries.

LASER WELDING vs TIG/MIG WELDING

TIG welding may generate extreme heat that deforms thin materials, produces poor visual finishes, is difficult when welding copper and limited welding metal of dissimilar thicknesses.



MIG welding requires consumable wire, material pre-cleaning and beveled joints for thick metals for full penetration. Travel and work angles are limited and vertical positions are extremely challenging.

Laser welding enables dramatically faster welding, is easier to learn and operate and provides higher-quality, consistent results across a wider range of materials and thicknesses than MIG or TIG with minimal distortion, deformation, undercut or burn-through.



LASER WELDING vs TIG/MIG WELDING

Description	Laser Welding	Traditional TIG/MIG Welding
Employment cost	The Operation is simple, ordinary people start it in half an hour and the employment cost is low.	Recruitment is difficult, wages are high and employment costs are high.
Electricity consumption	Less, Machine runs on single phase thus electricity consumption is almost half compared to Argon Welding	High, Machine runs on three phase. thus electricity consumption is high
Gas Consumption	Less gas flow required as emission of sputtering is less	High gas flow required as emission of sputtering is very high
Consumables	It can be welded with filler wire or without welding wire in case of zero gap	Consumables, welding wires/ electrodes are compulsorily required. Welding Torch is required to be changed after 1-2 months compulsorily is an added expense.
Personal Injury	Pure single wavelength beam energy, low indirect radiation, only need protective glasses to filter strong light	Occupational disease, serious physical injury
Efficiency	The speed is fast, the efficiency can reach 3-8 times that of argon arc welding, and the linear welding speed can reach more than 10 cm/s	Slow speed and low efficiency
Thermal deformation	Energy concentration and little influence of thermal deformation	Large thermal influence and deformation
Weld Quality	The weld is fine and beautiful, the solution pool is deep, uniform and the strength is high.	The weld is rough and irregular, which needs secondary grinding and polishing
Weldable material	Very thin materials can be welded, such as 0.05 mm stainless steel.	Do not weld too much thin material

PARAMETERS FOR DETAILS

Item	Specifications
Name	Handheld Laser Welding Machine
Laser Power	1000W/1500W/2000W/3000W
Electric Power	<6kw
Cooling mode	Water Cooling
Laser pulse Frequency	1-20HZ
Welding gap requirement	≤0.5mm
Pulse width	0.1-20ms
Adjusted spot range	0.1-3.0mm
Spot size	0.2-5.0mm/1.5mm
Minimum welding pool	0.1mm
Machine dimension	120*60*90cm/120*60*115cm
Water tank	inbuilt model
Working Environment Temperature	15~35
Optical Fiber	25um,10M
Continuous Working Time	24 hours
Collimation Length	F=50mm
Suggested Welding Thickness	0.5-5mm (depends on the materials)
Grand weight	240KG
Working Voltage	220V/380V 50Hz

COMMON WELDING METHODS

The utility model has simple and reasonable structure, thereby being easy to operate, high welding efficiency and low energy consumption.



Tailor-Welding



Corner Welding



Stitch Welding



Overlap Welding

COMPARE WITH OTHER WELDS

Item	Traditional Welding	Laser Welding	QuickWeld new generation laser welding
Heat input to the workpiece	Very High	Low	Low
Deformation of workpiece, undercut	Big	Small	Small
Bond Strength with base material	Common	Good	Excellent
Subsequent Processing	Polish	No or very little grinding	No or very little grinding
Welding speed	Common	Fast, very fast	
Applied materials	Stainless steel, Aluminium, Iron, Copper	Stainless steel, Aluminium, carbon steel, galvanized sheet	Stainless steel, Aluminium, Iron, Copper
Consumables	Many	Little	Little
Operation difficulty	Complicate	Common	Simple
Operator safety	Not Safe	Safe	Safe
Impact on the environment	Pollution	Environmental	Environmental
Welding fault tolerance	Good	Not good	Good
Pendular welding	No	No	Yes
Adjustable spot width	No	No	Yes
Welding quality contrast	Bad	Common	Excellent

WELDING DEPTH REFERENCE DATA

1000W + WOBBLE HEAD

Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	0.5-2mm	0.5-2mm	0.5-1.5mm	

1500W + WOBBLE HEAD

Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	≤3.5mm	≤4mm	≤3mm	≤3mm

2000W + WOBBLE HEAD

Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	≤5mm	≤6mm	≤4mm	≤4mm

3000W + WOBBLE HEAD

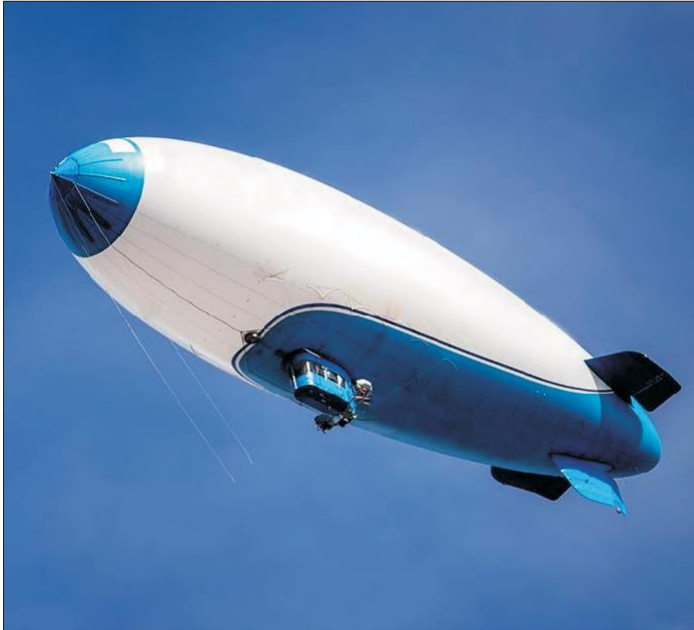
Material	Stainless Steel	Iron	Galvanized plate	Aluminium
Thickness	≤7mm	≤8mm	≤5mm	≤6mm

The welding seam is smooth and beautiful, the welding workpiece has no deformation, no welding scar, the welding is firm, and the subsequent grinding process is reduced, saving time and cost.



APPLICABLE INDUSTRY

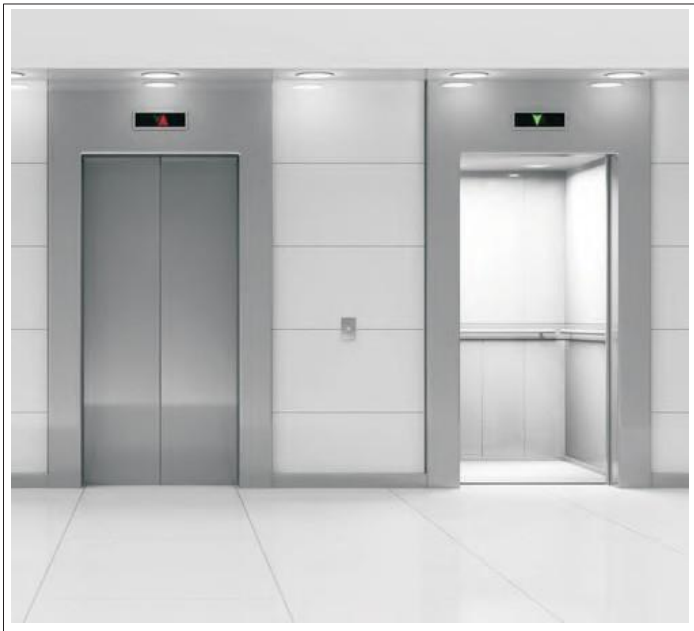
Applicable industry, railings of stairs and elevator, shelves oven stainless steel guardrail distribution box, stainless steel home supplies etc.



AIRSHIP



AUTO PARTS



ELEVATOR MANUFACTURING



HOUSEHOLD APPLIANCES



MACHINE MANUFACTURING



MEDICAL EQUIPMENT



METAL FABRICATION



CONTAINER MANUFACTURING

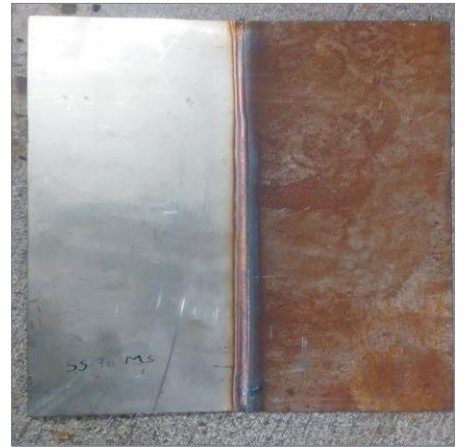
Laser Welding Samples



Stainless Steel



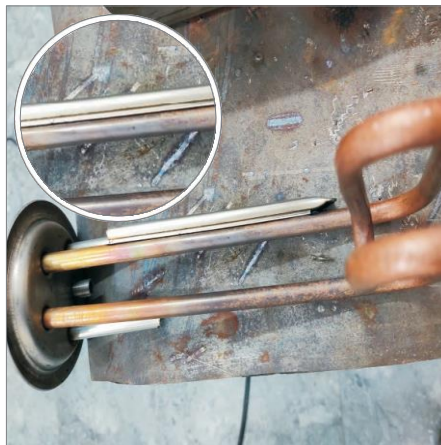
Carbon Steel



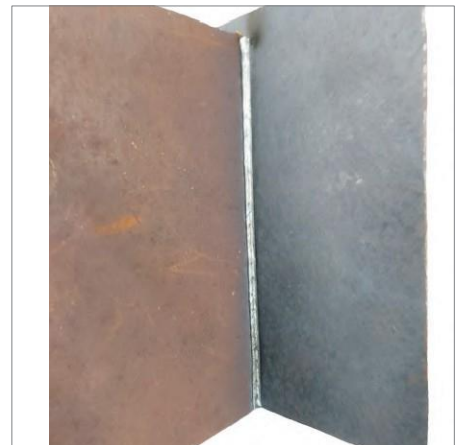
SS to MS



Galvanized Iron



Copper &
Stainless Steel



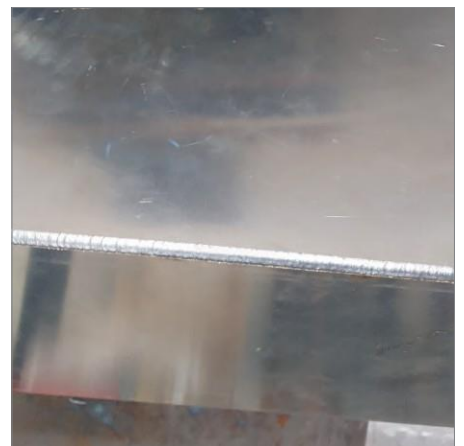
Carbon Steel



Galvanized Iron



Stainless Steel &
Carbon Steel

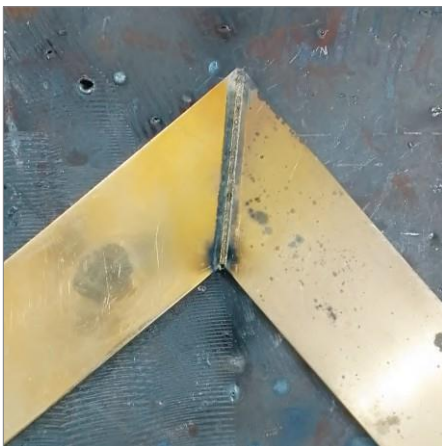


Stainless Steel

Laser Welding Samples



Carbon Steel



Brass



Titanium



MS



SS 308



Carbon Steel



Stainless Steel



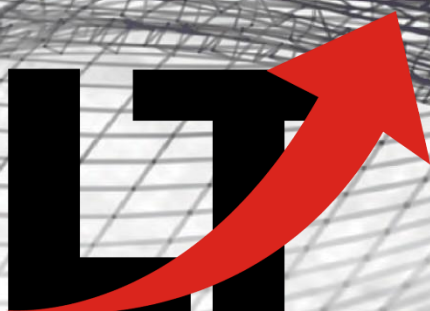
Carbon Steel Pipe



Carbon Steel Pipe

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