

50 Years
Celebrating



Building Nation with Exceptional Engineering

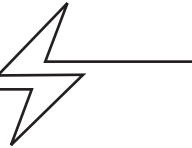


MITAR Technologies Limited

Corporate Office: #18, Technocrats Industrial Estate, Balanagar, Hyderabad - 500037, India

One Stop Solution for all Manufacturing Requirements

Civilian Nuclear Power | Wind Power | Hydro Electric Power | Fuel Cell & Hydrogen | Oil & Gas



1. MTAR Technologies is renowned for its contribution to Indian Civilian Nuclear Program since last 40 years.
2. We supply critical equipment and parts for Nuclear Island, we are capable of manufacturing equipment for Spent Fuel Management, Valves and other Customised Equipment.
3. We are closely working with Indian organisations such as NPCIL, BARC, IGCAR, NFC, DAE. We are keen to work with international companies and contribute in upcoming projects.



Channel Health Assessment System

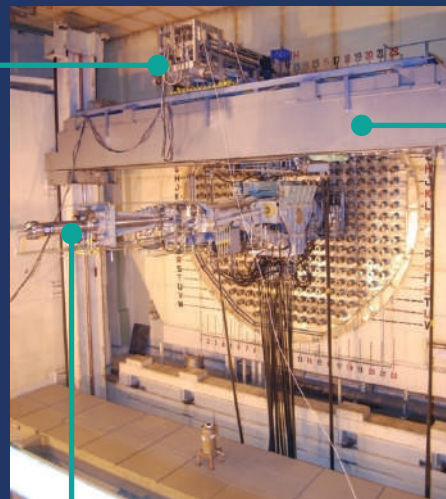
Channel Health Assessment System

MTAR has developed Channel Health Assessment System (CHAS) for Indian Nuclear Reactors. Detailed Design, Engineering, Manufacturing, Integration, Testing of the system was done in-house at MTAR.

CHAS is a remotely operated Electro-Mechanical equipment which is used to check the coolant channels and assess if there is any damage in the channels.



Fuel Machine Head



Photographs showing Nuclear Reactor Island of PHWR

Fueling Machine Bridge & Column

Bridge & Column is a 3-axis CNC machine. Locates Fueling Machine Head in front of Fuel Channels of Reactors. Refueling and removing of spent fuel is done with this machine.

MTAR has specialised in manufacturing Fuel Machine & column assembly for Nuclear Power Corporation of India Limited.

Fuel Machine Head

The Fueling Machine Head is used to Load & Unload Nuclear Fuel bundles, Sealing Plug and Shielding plug in the Fuel Channels of Nuclear Reactor as well as removal of spent Fuel.

MTAR has Supplied various Fueling Machine Heads for 220, 550 & 700 MWe for PHWR Power Plants.



Fueling Machine Bridge & Column

Fuel Channel Assemblies, End Fitting, Liner Tubes, Shielding Plug, Sealing Plug

- End Fittings are made from SS 403 material \varnothing 200 x 3000 mm. Precision machined and ground.
- Liner Tubes made out of SS 410 material are made of \varnothing 40 x 2500 mm Precision machined and ground.
- Shielding Plug is an assembly of 20 precision parts hardened and ground.
- Sealing Plug is an assembly of 18 precision parts hardened and ground.



End Fittings Package Comprising 30 items

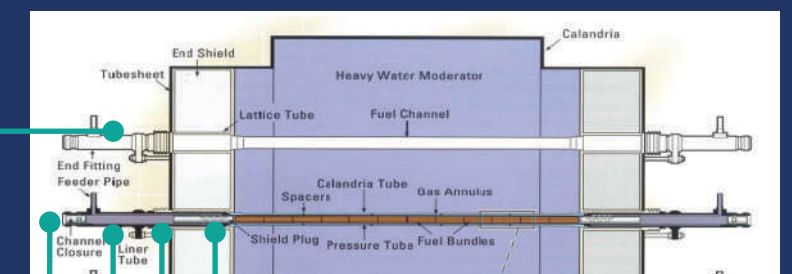


Sealing Plug Assembly

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Sealing Plug MAT:17-4PH, Inconel



Liner Tube, MAT: SS - 410



Section view of a Nuclear Reactor Core - Showing End Fittings, Channel Closure, Liner Tube, Shield Plug



Fuel Locator Assembly - ASTM A 564 Grade 630 (17-4 PH SS) and SS - 410

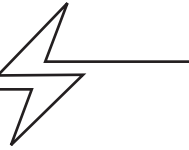


Shield Plug, MAT: SS - 410

Grid Plate Assembly - For Prototype Fast Breeder reactor

- Dimensions: \varnothing 8000 x 1000 mm (Height)
- Weight: 80 tons
- Positional accuracy of 1758 Tubes from datum & perpendicularity - maintained within 0.1mm
- Facilities Created:
 - CNC Vertical boring & Milling - Gantry SPM
 - Special Furnace
 - Clean Room for Assembly (with A/C)





Inclined Fuel Transfer Machine - For Prototype Fast Breeder reactor

Inclined Fuel Transfer Machine (IFTM) facilitates the exchange of spent fuel and other sub-assemblies from the reactor to outside the reactor building.

- Overall Height : 22 Meters
- Weight: 200 Tons



Other Nuclear Reactor Assemblies Supplied By MTAR

- CSRDM (Control and Safety Rod Drive Mechanism),
- DSRDM (Diverse Safety Rod Drive Mechanism),
- FFLM (Failed Fuel Location Module),
- CCP (Central Canal Plug),
- Core Temperature Monitoring Thermocouples and Neutron Detectors.

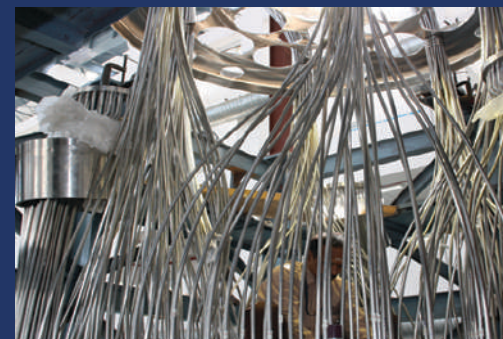
MTAR Ball Screws For Nuclear Reactor

- MTAR has Developed Special Hollow Ball Screws for Nuclear Power Plants.
- MTAR has exclusive facilities for Design, Manufacturing and Testing of High Precision Specialised Ball Screws.
- Four decades of experience in manufacturing & supply of 75 different types of Ball Screws meeting C1 accuracy from 8 to 100 mm diameter and Length 100 to 6000 mm.
- MTAR has developed special Water Lubricated Bearings for Nuclear Reactors.

Control Plug - For Prototype fast Breeder reactor

Control plug is a part of the top shield of the reactor, with Equipment's related to safety of the reactor, Control Plug is Ø2.5 m and 12 m in height weighing 56 Tons. For manufacturability it is divided sub-assemblies viz.

1. Neutron Detectors
2. Central Canal Plug Assembly
3. Mechanism box
4. Middle Assembly
5. Skirt assembly





Wind Power & Hydro Electric Power

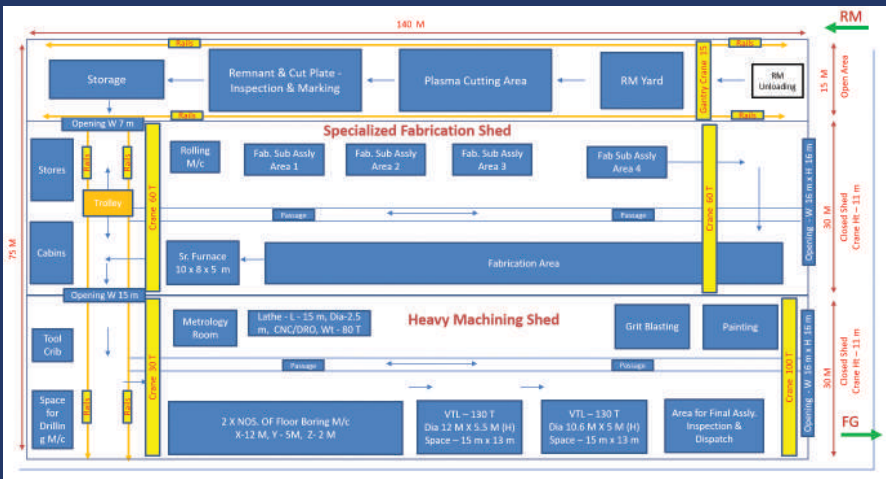
In addition to existing 7 manufacturing plants, MTAR is establishing a state of the art large manufacturing facility to address Specialised Fabrication and Heavy Engineering product portfolio for following energy sectors:

1. Wind Power
2. Hydro Power
3. Nuclear Power
4. Waste to Energy

Facility Sizes – L X B X H - 140m x 75m x 23m

Crane Capacity – 130 T

Manufacturing Facility Layout



Details of Machinery and Products are placed below:

Infrastructure Details		
Sr. No	Machine Names	Specifications
1	Vertical Turning Center	Swing Dia 12 mx Ht – 5.5 m, Capacity – 130 T
2	Floor Boring Machine	X – 10 m, Y – 5 m, Z – 2 m
3	Lathe - CNC	L – 15 Dia – 2.5 m
4	Plate Bending Machine	Plate Thk – 10 mm x 3 m (W)
5	SR Furnace	10 m (L) x 8 M (W) x 7 M (Ht)
6	Grid Blasting	L – 6.5 m x H – 6.5 m x W – 7 m
7	Painting	L – 8 m x H – 7 m x W – 8 m
8	Cranes	130 T

Sr. No	Focus Areas & Products Names
1	Hydro Power Draft Tube, Spiral Casing, Stay Ring, Head Cover, Bottom Cover, Draft Tube Cone etc.
2	Products for Wind Energy, Steel Plant, Cement Plant, Chemical Plants, Mining, Off shore & On shore Oil Package.
3	Heat Exchanger, Steam Generators, Pressure Vessels etc.
4	Nuclear Sector - Pressure Vessels, Tanks, Vessels, Calandria, Nuclear Headers, CASKs – Nuclear Fuel Storage.
5	Specialised Fabrication of Satellite Shell, Radar Bases.

Certification
ISO 9001 ,14001, 45001
ASME U STAMP FACILITY



We are looking forward to JV, TOT base projects or Manufacturing Partnership with Indian or international companies for setting up long term business relationship in energy sector covering Wind Power, Hydro Power, Nuclear Power and waste to Energy sectors.



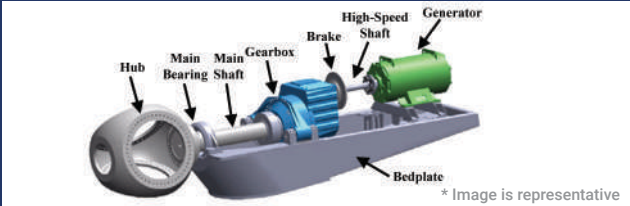
Draft Tubes, Spiral Casings, Shafts and other equipment for Hydro Power



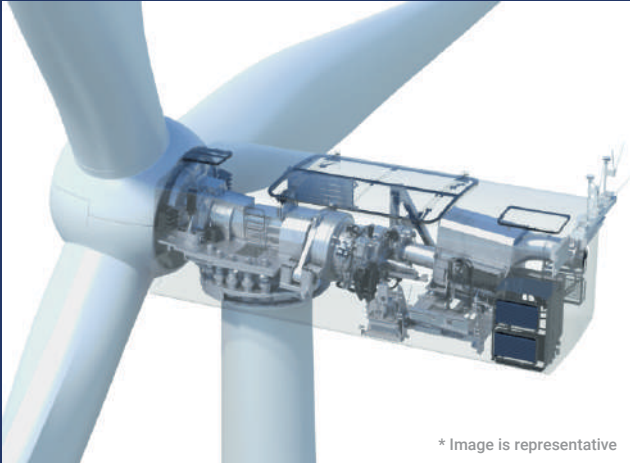
Heat Exchangers



Other Industrial Equipment



Parts for Wind Power



Equipment and parts for Wind Power

Fuel Cell & Hydrogen Power

Clean energy is one of our key customer sectors and MTAR is accordingly, involved in the manufacturing and specialized fabrication of critical assemblies to customers such as Bloom Energy and others.

MTAR supply power units, specifically hot boxes to Bloom Energy USA with which, MTAR has been associated with, for over nine years, and currently, involved in the development and manufacture of hydrogen boxes and electrolyzers, to serve Bloom Energy.

MTAR caters for precision fabrication of sheet metal like laser cutting, rolling, pressing, spinning, TIG welding, Vacuum Brazing, electro mechanical integration of assemblies made of Special grade steels. All facilities are available in-house including Fins manufacturing.

MTAR is spearheading in the direction to become a major contributor in Hydrogen Economy and we look forward to associate with multiple customers and different technologies catering to Fuel Cell & Hydrogen power sector.



Electrolyzers And Other Assemblies



In House Vacuum Brazing Facilities



Oil & Gas

MTAR provides all the manufacturing solutions such as advanced machining, specialized welding & fabrication, assembly & testing, heat treatment, special processes which required for manufacturing critical parts, sub-assemblies & assemblies used in Oil & Gas.

MTAR has capabilities to manufacture products required in exploration, drilling, refining, and transportation and storage of Oil & Gas



Rotor Shaft



Coupling Shaft



Transmission Shaft



Filter Basket Family 1



Ceiling Tube



Thread Protector



Housing



Tubes



Filter Basket Family 2



Insert

About Us

MTAR Technologies Limited (MTAR) Hyderabad, India is a pioneer manufacturing establishment started in 1970 and has grown gradually in past 5 decades is serving the industries by Implementing the state of art niche manufacturing technologies in the domains of Energy, Defence, Aerospace & Space, Ball Screws, Roller Screws & Actuators.

Vision

- Be a reliable manufacturer and offer innovative manufacturing solutions to clients across diversified segments and geographies.
- Enhance our current engineering capabilities to cater to the Engineering needs of the Nation, thereby creating value for our employees, customers and other stakeholders in the process.
- Be a socially responsible firm and contribute to solve some of the global problems such as reduction of carbon emissions, thereby creating a sustainable eco-system.

Mission

Our mission is to create complex and differentiated engineering products, thereby creating value to all the stakeholders involved in the process and to the end users.

Sectors of MTAR

- Energy
 - Nuclear Power
 - Oil & Gas
 - Fuel Cell Technology & Hydrogen
 - Wind Power & Hydro Power
- Defence, Aerospace & Space
- Ball Screw, Roller Screws & Actuators

Capabilities

- Design & Engineering
- Advanced Machining
- Specialised Fabrication
- Assembly & Testing
- Brazing & Heat Treatment
- Surface Treatment & Special Process

Certification

- ISO 9001 : 2015
- AS 9100D : 2016
- ISO 27001 : 2013
- ISO 14001 : 2015
- ISO 45001 : 2018



UNIT - I
Sector: Nuclear, Defence and Aerospace



UNIT - II
Sector: Space



UNIT - III
Sector: Ball Screws, Roller Screws & Actuators



UNIT - IV
Heavy machining



UNIT - V
Surface Treatment, Heat Treatment and Special Processes



UNIT - VI
Assembly and Integration Facility



UNIT - VII EOU
Sector: Energy, Defence & Aerospace - Export



UNIT - VIII Adibatla
Specialised Fabrication, Heavy Engineering & Sheet Metal and Aerostructures

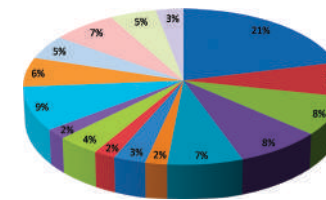
Infrastructure

ONE STOP SOLUTION FOR ALL MANUFACTURING REQUIREMENTS

MTAR has 370 Plus machines, 1500 plus manpower and 7 large manufacturing plants.

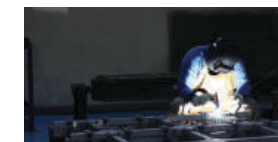
Manufacturing

- CNC Turning Machine
- Jig Boring Machine
- Machine Centers
- VMCs
- Turning Machines
- CNC Turn Mill Machines
- Deep Hole Boring Machines
- Deep Hole Drilling Machines
- Horizontal Boring Machines
- Vertical Turning Machine
- Wire Cut Machine
- Furnace & Surface Treatment Equipment
- Thread Grinding Machine
- Cylindrical Grinding Machine
- Surface Grinding Machine
- Honing Machine



Fabrication

1. Automatic TIG Welding facility
2. MIG welding facility
3. Submerged arc welding machine
4. Welding Head manipulator
5. Job manipulator/positioner
6. EB Welding facility
7. Orbital Welding Facility



Vaccum Brazing Facility

1. Vacuum Brazing Furnace – 6 nos
2. Rotary Vac. Brazing Furnace – 2 nos

Painting facility

1. L x B x H - 8 m x 7 m x 8 m
2. L x B x H - 8 m x 3.5 m x 2.6 m

Grit-Blasting Facility

1. L x B x H – 6.5 m x 6.5 x 7 m

Heat Treatment Facilities

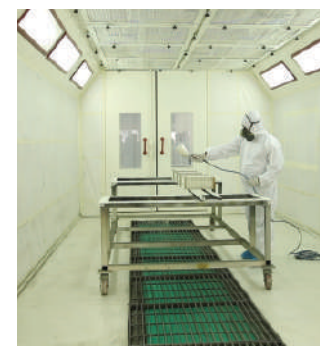
1. Bogie Furnaces
2. Air Circulation Furnaces
3. Sub Zero Treatment Furnaces
4. Pit Type Forced Air Circulation
5. Box Furnaces
6. Salt Bath
7. Gas Carbonizing
8. Bell Furnaces

Assembly & Testing

1. Helium Leak Detector – Pfeiffer Vacuum HL550
2. Pneumatic Pressure Testing (275 bar)
3. Pneumatic flow test with LN2 Plant
4. Hydraulic Pressure Testing (650 bar)
5. Vibration & Shock Testing tables (Tira 800N, LDS 3000N)
6. Hot and Cold Chambers (-70deg C, +100; 200)
7. Full fledged NDT facilities such as Radiography, Ultrasonic, Magnetic Particle and Dye Penetrant etc.
8. Fully equipped with requisite facilities for Dimensional and Geometrical inspection

Chemical Process

1. Nitriding
2. Anodization
3. Hard chrome plating
4. Nickel plating
5. Induction Hardening
6. Electro polishing
7. Pickling
8. Passivation
9. Zinc Plating
10. Painting booth





Building Nation with Exceptional Engineering

**Manufacturing Engineering, Process Engineering, Precision Machining,
Quality Control, Assembly Integration Testing and Qualifications**

Defence

Aerospace

Space

**Indigenous
Assemblies**

**Fabrication
& Heavy
Engineering**

**Quality Accreditations - ISO 9001:2015 & AS9100D, Policies, Guidelines,
Customer Practices, SOPS, Best Engg Practices**



UNIT I



UNIT II



UNIT III



UNIT IV



UNIT V



UNIT VI



UNIT EOU



UNIT VIII

INTEGRATED INFRASTRUCTURE UNDER ONE ROOF



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