India Capabilities

LEADING THROUGH INNOVATION

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WOM Timeline

1980
- WOM India established in Pune, Maharashtra (near Mumbai, India)
- WOM UK established in Aberdeen, Scotland, serving the North Sea and Europe
- WOM became ISO certified and global contract was signed with major well-test company

1985
- Patented Magnum Dual Seal Gate Valve

1989
- Owner/CEO: Mr. Sudhir Puranik established WOM, Inc. in Houston TX (USA)

1991
- WOM expanded and began to manufacture Ram BOPs 4''/26'' and Annular BOPs 7''-21'', offering complete BOP Stacks

1993
- WOM introduced Patented Magnum Subsea Gate Valve with Fail-Close/Open Actuator

2000
- WOM Middle East established in Dubai

2004
- WOM developed the Subsea Deepwater Riser System
- WOM expanded globally, establishing presence in Singapore, serving South-East Asia

2009
- WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident
- WOM successfully completed PR2 Level HPHT Test (-20F to 450F)

2007
- WOM Asia Pacific established with heavy assembly capacity
- WOM expanded in Dubai and established Magnum Technology Center (MTC) to support WOM equipment and provide complete Well-Testing Package Solutions

2010
- WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident

2012
- WOM successfully completed PR2 Level HPHT Test (-20F to 450F)
- WOM established an office in Seoul, South Korea

2014
- WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident
- WOM is awarded “Best Technology” during Petrotech 2016 for the SP-Tandem Booster
- WOM is named “Manufacturer of the Year” by Greater Houston Procurement Forum

2015
- WOM developed the Super-Power (SP) Tandem Booster to enhance the shearing force of any size RAM BOP (patent pending)

2016
- WOM is awarded “Best Technology” during Petrotech 2016 for the SP-Tandem Booster

2017
- WOM successfully completed PR2 Level HPHT Test (-20F to 450F)

2018
- WOM developed Riser-Less Light Well Intervention System (RLWIS)

2019
- WOM India expanded assembly and testing shop to 14,000 sq.ft. WOM adds two new CNC machines and a new custom-built thermal spray machine

2020
- WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident

2021
- WOM successfully completed PR2 Level HPHT Test (20F to 450F)

2022
- WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident

2023
- WOM successfully completed PR2 Level HPHT Test (20F to 450F)

2024
- WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident

2025
- WOM successfully completed PR2 Level HPHT Test (20F to 450F)
WOM expanded and began to manufacture Ram BOPs 4”/26” and Annular BOPs 7”-21”, offering complete BOP Stacks.

WOM introduced Patented Magnum Subsea Gate Valve with Fail-Close/ Open Actuator.

WOM Middle East established in Dubai.

Magna Casting established for steel castings.

WOM UK expanded workshop and testing facilities to 2120 sqm to include heat treatment and pressure testing.

WOM UK established an office in Seoul, South Korea.

WOM Valves & Controls Intl established with Headquarters in Dubai to provide the critical valves & Controls solution for Oil & Gas, Power & Process Industries.

WOM India expanded assembly and testing shop to 14,000 sq.ft. WOM adds two new CNC machines and a new custom-built thermal spray machine.

WOM developed the Subsea Deepwater Riser System.

WOM successfully tested a 3-1/16” 15K Subsea Fail-safe Closed Gate Valve at a depth of 16,000 ft.

WOM established an office in Singapore, serving South-East Asia.

WOM successfully assisted capping the exposed well in the Gulf of Mexico following the BP Macondo blow-out incident.

WOM successfully completed PR2 Level HPHT Test (-20F to 450F).

WOM developed the Super-Power (SP) Tandem Booster to enhance the shearing force of any size RAM BOP (patent pending).

WOM successfully completed a 2100 sqm expansion of the workshop and testing facilities in Dubai to include heat treatment and pressure testing.

WOM engineered the Hyper Torque 16 to reduce the operating torque of large and high-pressure gate valves (patent pending).

WOM is named “Manufacturer of the Year” by Greater Houston Procurement Forum.

WOM is awarded “Best Technology” during Petrotech 2016 for the SP-Tandem Booster.

WOM began manufacturing 18 3/4” 10K Annular and Ram BOPs.

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WHAT

DEFINE US

Vision
To make a difference in the communities in which the WOM group of companies operates by providing a world-class organization that develops a way of existence. It is important to us to set the pinnacle of standards in all walks of life, whether at work or in society, to ensure generations of healthy, stable, and fruitful lives.

Mission
To support and serve the oil & gas industry with products having relentless reliability and fulfilling our customer’s “wish lists” by continuously designing and developing innovative features that will reduce the end user’s maintenance and increase overall safety and production.
COMMITMENT TO QUALITY

WOM India understands that the safety of the people operating our equipment and that of the working environment is dependent on the quality of our workmanship. Identification and traceability allow us to maintain the highest quality of manufactured products. Inspection and a clean working environment ensures that our customers receive that premier equipment that only WOM India can offer. The products that WOM India manufactures meets or exceeds our client’s most strict specifications. WOM India encourages its customers to provide feedback regarding the quality and performance of our products.

Quality Management System Certifications
• ISO 9001:2015
• API Spec Q1
• ISO 9001:2015 and AS 9100D

API Product Certifications
• API 6A
• API 6D
• API 16A
• API 16C
• API 17D

Other Product Certifications
• PED 97/23/ED
• ATEX 2014/34/EU
• MSA DDNV-OS-E101
• MSA DNV 2.7-1 & DNV 2.7

Quality Control

WOM India is committed to providing the highest quality products possible while protecting the safety of its employees, customers, and the environment. All WOM India products are designed and manufactured according to API and ISO 9001 standards and specifications.

Nondestructive Testing (NDT):
• UT
• MP
• LP
The engineering staff takes an active interest not only in the design but also in the manufacturing and assembly activities of the products. WOM India has developed many innovative manufacturing processes and machine tools to cater to its needs such as a ball grinding machine, made in-house, that can handle turning a ball up to 36” in size; as well as, in-house special purpose machines (SPM’s) to handle drilling and other machine operations as well. The success of these machines and processes speaks volumes on innovation and drive of WOM engineering.
MANUFACTURING

Welding

Types of Machines:
• SMAW – Shielded Metal Arc Welding or Manual Metal Arc Welding (MMAW)
• GTAW – Gas Tungsten Arc Welding
• GMAW – Gas Metal Arc Welding
• SAW – Submerged Arc Welding
The output and the quality of all the machines are same, only the method differs.

Welding Capabilities:
• Overlays Inconel (625), SS(316L): Ring grooves,
• Seat pockets, Seal ID, cavity bore, flow bore All Wetted Area etc.
• BOP’s butt joints (Max thickness up to 200mm)
• Hard facing with ER CuAl-A2 alloy
• BOP Repair
• Branch Welds (set on & set in) & Butt joints:
  • Low alloy steel.
Fabrication

The WOM fabrication department handles all fabrication of critical joints for producing quality components with CRA materials, carbon and stainless steel, while using various manual and semi-automatic machines and welding processes.

The fabrication department is equipped with MIG, TIG, SMAW advance welding machines. Stretching across 2340 sq. feet, the shop is also climate controlled with an exhaust system to increase the production as well as productivity by reducing rejection.

- **Equipment**
  - EOT Crane: (Capacity of 10 + 10 ton) – 1 no.
  - JIB Crane: (Capacity of 2 ton) – 5 nos.
  - Forklift: 2 nos.

- **GTAW (AC-Pulse Mode) Machine**
  - Semi-Automatic
  - Specification: QTY #01
  - Digital welding technology
  - HF Ignition
  - TIG Pulsing
  - Anti-stick function
  - Rated output (duty cycle): 400 amps.

- **GTAW/FCAW Welding Machine**
  - Semi-Automatic
  - Specification: QTY #3
  - Digital welding technology
  - Multi-functional, both TIG and FCAW process carry out
  - HF Ignition
  - Anti-stick function
  - Rated output (duty cycle): 400 amps.

- **MIG and MAG (Manual) Machine**
  - Manual
  - Specification: QTY #4
  - Rated Output (Duty Cycle): 400 amps
  - Increase productivity and quality of weld
  - Filler wire flux and solid can use up to Dia 0.8mm to 1.2mm.

- **Fabricated Products**
  - 12 x 15 x 26 ft. (W x H x L) fabricated lifting skid for choke and kill manifolds
  - Lifting baskets and skids for flow head and choke manifolds
  - Lifting equipment for oil and gas products we manufactured.
Painting and Blasting

- **Paint Booth**
  - Paint Shop having down draft water wash paint booth and size 350 sq. ft.
  - Working area is 13 x 21 x 10 ft. (W x L x H) and has 20,000 m³/hr. capacity 3# blowers for suction
  - Material can be painted at a maximum size of 10 x 15 x 8 ft. (W x L x H) with a maximum weight of 8 tons per booth dimensions. Any material exceeding the size must be painted in closed shop with proper ventilation

- **Blasting Booth**
  - 363 Sq. Feet.
  - Blasting pressure is up to 4-6 bar.
  - Blasting for loose jobs up to a maximum size of 12 x 20 x 5 ft. with a maximum weight up to 6 tons.
  - Blasting removes rust from material and provides anchoring to the jobs.
  - After blasting, primer is applied onto all material for corrosion resistance. From there, it is sent to assembly.
  - Daily capacity for blasting is a minimum of 7 tons but varies upon dimensions and physical condition.

- **Pretreatment Chemical**
  - We use Degreez 8X, a chemical for degreasing and derusting, for cleaning purposes.
  - To remove the stress of oil and grease for a thorough cleanse, a paint thinner is applied following the chemical wash.

- **Lifting Crane**
  - Paint Shop includes a 10-ton capacity working load for overhead crane
  - Blasting Shop includes a 5-ton capacity working load for overhead crane

- **Coating System**
  - Coating is decided upon customer requirements and WOM painting standards.
  - Epoxy and Polyurethane base systems are used for most applications. Chlorinated Rubber based paint may also be used for defense products.
  - Paint storage follows requirements and customer requirements is a minimum of 3,000 lit.

- **WOM Paint**
  - Our base supplier of paint is JOTUN and International Akzonoble.
  - Upon customer request, we can procure or import paint from other leading paint manufacturers.
  - For painting, we use an airless gun with a pressure of 45:1 and is mainly used for larger equipment.
  - For smaller equipment, we use the pot gun for painting with a suitable drying system.
Machining

WOM Products are manufactured by highest applicable standards. Top of the line Machines include:

- CNC Turning Center
- CNC Vertical Turning Center
- Horizontal multi-tasking Turn Mill Machines
- Vertical multi-tasking Turn Mill Machine
- CNC Vertical Machining Center
- CNC Horizontal Machining Center
- Conventional Boring Machines and many more.

This hi-tech machining facility with a total of #70 ultra-modern machines, ensures dimensional accuracy, precision machining and consistent high quality.

WOM’s space-age Machining Facility successfully reduced machining time by as much as 70%
Assembly and Testing

WOM Pune, armed with a 4000-sq. ft. state-of-the-art Assembly and Testing Facility, operates as per API norms, certifying product quality and on-time delivery. The assembly and testing of all components and assemblies are performed in a controlled area free from contamination. The testing booths include both Hydro testing and Gas testing units. All safety related precautions are taken while assembling, dismantling and testing. This facility conforms to API procedures, strictly enforced in order to maintain superior quality of our products. Material Specifications including heat treatment, Mill Tests and Equipment Tests are all well documented and are presented to customers upon request.

R&D Facility

• Strategic Product Development is carried out in WOM’s Research & Development Center regardless of its type or category i.e. Oil & Gas, Aerospace, Defense and Railways.

• R & D center is setup for products validation like PR-2 as per API norms.

• This is a highly secured Restricted Zone with access to only authorized personnel.

• For validation of PR-2, PR-2 chamber is installed within R&D Center, having capacity of -70° Celsius to 350° Celsius.
RENOVATED
CNC SHOP
Magnum Forge is a manufacturer of open die and closed die forgings, engaged in manufacturing Oilfield and Power Transmission Components in various grades like low and medium carbon steel, alloy steel, stainless steel, Inconel, 17-4PH, duplex and super duplex.

The plant is ISO 9001 and PED 97/23/EC certified and fortified with experienced technocrats. The management and workforce of Magnum Forge maintain strict quality control procedures that conform to the standards set by the industry in which the product will be used. The plant has an annual capacity to forge more than 25,000 tons, ensuring quick delivery and competitive pricing.

Magnum Forge not only provides highest quality forgings, but also has significantly contributed in cutting down the delivery time.

- Advantages of Close Die Forging:
  - Material grain flow is as per component contour which gives superior strength
  - Near net shape
  - Minimal machining allowance, substantial saving in raw material.
  - Mass production is possible, resulting in low manufacturing cost.

Close Die Forging capabilities helped WOM reduce delivery time by SIX WEEKS.

Infrastructure

With a commitment to be a ‘single point source’ for its customers, Magum Forge has the very best equipment for forging, machining, and testing qualified to produce forgings in a variety of configurations ready to meet virtually any customer requirement.

Forging

Pneumatic Close Die and Open Die Hammers, with highest capacity being a 16T close die hammer.
Heat Treatment

- **Machine Details:**
  - Electrically operated fix hearth batch type, hardening (quenching) furnace - capacity 10 MT
  - Electrically operated fix hearth batch type, hardening (quenching) furnace - capacity 15 MT
  - Quenching Tanks: 1) Water – 1 Lakh Litre
  - 2) Polymer – 1 Lakh Litre

- **Operations Performed:**
  - Normalizing, Annealing, Solution Annealing, Water + Polymer Quenching, Tempering.
  - Two Quenching tanks with depth of 6 meters, one for water and other for polymer quench having 1 lakh litre capacity each.

- **Advantage:**
  - Overall manufacturing capacity enhancement from 300 MT to 520 MT.
  - Temperature uniformity (+/-) 3°C for Hardening and Tempering in the electric HT furnaces. Whereas, in existing oil-fired furnaces, it is (+/-) 14°C for Hardening and (+/-) 7°C for Tempering (which is also within limit as per API 6A).
  - Since furnace is electrically operated, it is free from pollution, Flue gas and noise.
MCMW

Magna Casting and Machine Works, a WOM group of companies, produces highest quality Castings in Carbon, Alloy and Stainless Steel that meet and exceed customer’s most stringent requirements and industry standards.

MCMW has developed ingot manufacturing in various material grades through EIF + AOD route (Argon oxygen decarburization process).

Quality Management System Certification
• ISO 9001:2015

Material manufacturer per PED/2014/68/EU

EOHS Management System Certification
• ISO 14001: 2015
• ISO 45001: 2018

MCMW Metallurgy Lab Certification
• NABL accredited in accordance with the standard ISO/IEC 17025:2017
India Capabilities

Cast Products

- Ball Valve: Bodies; End Connections; Balls & Seats
- Gate Valve: Choke Bodies, Pump saver bodies, Mall brain choke bodies & Bleed off choke bodies, Actuator Housing, Actuator Cylinders, Inlet & Outlet Tee, Magnum Bodies, Ring & Bonnet gaskets, Junk ring & Backup rings, Seat retainer seats & Cross over flange
- Norriseal: Globe valve bodies & Bonnets
- APT: Yoke Casting
- Ingots: Pencil, Square, Round & Fluted type

The plant has capacity to produce up to 120T/month i.e. 1400 T/Annum. Maximum Single piece casting wt. up to 1200 kgs. by gravity process and 450Kgs by centrifugal casting process in Alloy Steel & Stainless Steel & Ingot up to 2.3Ton.

Magna Casting is equipped with most advanced technology which includes Induction Furnaces, AOD Unit with wire feeding M/C and FES system, 320kVA generator, Chemical Bonded Sand System, Sand Reclamation, Band Saw, Lathe machines and many more.

The company is also armed with a full fledge Laboratory and testing facility which included Spectro Meter, Universal Testing Machine, Impact Testing Machine, Metallurgical Microscope, Sieve Shaker etc. NDT activities like VT, PT, MT & UT are also carried out by qualified personnel.
STORAGE AND PRESERVATION

**WOM ASRS System:**

Automated storage and retrieval systems (ASRS) facility at WOM India increased inventory control and tracking, including greater flexibility to accommodate variability in flow of material and instantaneous reporting of material moves to the host computer system. These reports can be generated as Item wise, Job. No. wise, Location wise, Weight wise, etc.

Our ASRS system consist of machines that move upwards and downwards, multiple parallel storage aisles, storing and retrieving products and materials from as small as a nut and bolt weighting 250 grams up to 1.5-ton job body for dissemination to internal and external destinations. It is comprised of modular subsystems that can be easily replaced to minimize downtime and extend the service life of the overall system.

With reduced labor costs, lowering workforce requirements, increased workplace safety and improved warehouse space utilization, both vertically and horizontally creating greater storage density, ASRS system has demonstrated its significance in optimizing WOM’s biggest inventory worldwide.

**Features:**

- User friendly microprocessor based controls.
- No repeated sequence / synchronizations. Operates even after power shutdown since carrier position is stored in PLC memory.
- Tailor made software
- Expandable structure

**Storage**

WOM has adopted latest preservation techniques for storage of all semi-finished and finished material. Aluminum Bags are used for semi-finished and finished jobs as well as for full assemblies. Rust preventive oil for semi-finished material, protector caps for ring grooves, plastic coating for stud, etc. some more examples.

**Features:**

- Reduction in deterioration of material quality.
- Oxidation-proof.
- Material is protected from climatic damages as well as handling damages.

**Size and Capacity**

- Total number of pallets: 2,856
- Size of the Pallet: L40” x W40” x H30”
- Load carrying capacity of each pallet: 1.5 Ton
- Total storage capacity: 4,284 Ton
India Capabilities

MAGNUM FORGING

HEAT TREATMENT
ABOUT US

Worldwide Oilfield Machine (WOM) Inc., headquartered in Houston, TX was established in 1980 by founder Mr. Sudhir Puranik. As a multinational, vertically integrated company, WOM specializes in the designing and manufacturing of pressure control products used in various drilling, well-testing and well-production applications including high pressure, high temp (HPHT) and highly corrosive environments. With over 2500 employees strategically located worldwide, WOM operates in state-of-the-art manufacturing centers located in 5 cities around the globe— Houston (USA), Aberdeen (Scotland), Dubai (UAE), Pune (India), and Singapore (Singapore). Each facility well-appointed with engineering centers, sales offices and assembly/testing workshops.

WOM offers various sizes and pressure ratings of up to 20K psi in gate valves, BOPs, well-heads, choke and kill manifolds, subsea intervention systems, well containment cap and variety of other products for onshore, offshore, and subsea applications. Our field-proven equipment has made WOM a preferred and trusted name among the world’s major oil companies, drilling contractors and well-testing companies. WOM’s patented equipment has broken records, set new standards of performance and are designed to meet the most stringent safety regulations and industry requirements. WOM continues to expand its capabilities and portfolio while emphasizing on research and development to ensure on-time delivery, quality and reliability in each product and process.

WOM India located in Pune, Maharashtra is equipped with world-class engineering, designing, manufacturing and testing of drill-through, well control equipment, surface and subsea equipment in accordance with applicable API specifications and PED/97/23 EC. With over 1500 employees, WOM India is the heart of the manufacturing for the WOM Group and is responsible for producing over 75% of WOM products that reach every corner of the globe. Additionally, WOM India operates as backend support for WOM’s spare parts market.

In an effort to deliver superior quality, higher reliability and to ensure a consistent supply of products and services, WOM India initiated a vertical integration program on which Magnum Forge & Machine Works (MFMW) and Magna Casting & Machine Works (MCMW) was founded. Magnum Forge and Machine Works (MFMW) produces forgings in a variety of configurations to meet customer requirements. A 16-ton forging hammer is the beating heart of MFMW, allowing for single piece forgings such as the 13” 10K and 11” 15K closed die BOP forgings- a feat which only a handful of foundries around the world are capable of.

With an extensive arsenal of open and closed dies, MFMW is capable of producing premier WOM products at a high capacity, ensuring quick delivery with competitive pricing and unsurpassed quality, all while conforming to the strictest quality control procedures in the industry. Magna Casting and Machine Works, incorporated in 1999 and managed by experienced technocrats, is a state-of-the-art melting facility located in Pune, India. The principle objective of MCMW is to manufacture the highest quality castings possible in carbon alloy and stainless steels, which meet the most stringent of industry requirements. MFMW and MCMW are both IS-9001 & CE certified.
WOM proudly celebrates 40 years of providing the oil & gas industry with meticulously designed, well-engineered pressure and flow control equipment.

WOM looks forward to continuing to make a positive impact on the process of safely extracting one of the world’s most precious resources. We are honored to work with the businesses that have trusted our commitment to excellence and appreciate each member of our group that has contributed to our success.

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