



Corporate Presentation



Corporate Profile

Murugappa Group

- ▷ INR 295 Billion (USD 4.5 Bn) Conglomerate
- ▷ One of the largest family promoted, professionally managed, diversified business groups
- ▷ Market leaders in served segments including Abrasives, Auto Components, Transmission systems, Cycles, Sugar, Farm Inputs, Fertilisers, Plantations, Bio-products and Nutraceuticals.



Corporate Profile

Murugappa Group- Business Philosophy



The fundamental principle of economic activity is that no man you transact with will lose, then you shall not.

- An excerpt from Arthashastra

Corporate Profile

Murugappa Group – Values & Beliefs

The Spirit of the Murugappa Group is inspired by a set of enduring values and beliefs called the 'Five Lights' – a guide to everyday excellence. It clearly defines a way of life, and is demonstrated by these strong values we live by: Integrity, Passion, Quality, Respect and Responsibility



Corporate Profile

Murugappa Group - Today



FERTILISERS



SUGAR



TEA



PESTICIDES



ABRASIVES



REFRACTORIES



INDUSTRIAL CERAMICS



CUTTING TOOLS



BICYCLES



CHAINS



STEEL TUBES / STRIPS



GEAR SYSTEMS



METAL FORMING



FINANCIAL SERVICES



INSURANCE



CONSTRUCTION



WATER



NUTRACEUTICALS



PACKAGING



POWER GENERATION



HOME FURNISHINGS



IT INFRA MANAGEMENT



murugappa

Corporate Profile

Murugappa Group – Social Responsibility



AMM Foundation is a non-profit organization run by the Murugappa Group



4 Schools, a polytechnic;
approximately 10,500 students



4 Hospitals - over 8 lakh patients
treated last year



Scholarships for needy meritorious
students



Scholarships for scholars for pursuing
their professional degrees

Corporate Profile

Murugappa Group – Global Partners



Germany



Groupe Chimique Tunisien

Groupe Chimique Tunisien - Tunisia



Japan



Japan



Japan



U.K



Sociedad Quimicay Minera - Chile



tsubamex

Tsubamex company limited - Japan

Corporate Profile

Tube Investments of India Ltd.

- ▷ Tube Investments of India Ltd (TII) has as its main business divisions cycles, metal forming, tube products and chains .
- ▷ Divisions
 - TI Cycles: TI Cycles of India
 - TIDC: TIDC of India
 - TPI: Tube Products of India
 - TIMF: TI Metal Forming
- ▷ Products
 - Bicycles
 - Fitness Equipment
 - Infant Mobility Solutions
 - Auto Components
 - Precision Tubes
 - Car Door Frames
 - Sheet Metal Components
 - Automotive Chains
 - Industrial Chains
 - Fine Blanking
 - CR Strips
 - Farm Implements



TI acquired 70% of Shanthi Gears in 2012-13



**Metal Formed
Products**



Engineering



Bicycles



Shanthi Gears

Shanthi Gears

Introduction

- ▷ Shanthi Gears Limited (SGL / Company), is amongst the largest players in the industrial gears segment in India
- ▷ Promoted by a technocrat entrepreneur having over 4 decades of industry experience
- ▷ Strong professional management team supported by a highly experienced & motivated workforce
- ▷ Commenced Operations in 1969 and headquartered in Coimbatore, SGL is a public limited company listed on Indian stock exchanges
- ▷ Manufacturer of wide range of power transmission components including:
 - Gears
 - Gear boxes
 - Geared motors
 - Gear assemblies
- ▷ Only gear company in India having AS 9100C certification (Aero Standards)
- ▷ Fully integrated operations with strong in-house R&D and design capabilities
- ▷ Employees: ~ 900 professionals
- ▷ Healthy margins due to strong focus on custom made products



Shanthi Gears

Key Milestones

Established as Shanthi Engineering & Trading Co manufacturing small gears

1969

Started manufacturing of Worm Gear Boxes

1980

Started manufacturing industrial and special gear boxes

1987

Certified AS 9100 C

2008

Focus on Institutional sales, & Service business

2013

1972

Private limited company and started manufacturing textile gears

1986

Equity shares listed on stock exchanges

2002

Certified ISO 9001

2012

Acquired by TII Murugappa Group

2016

Capacity expansion, Product development & New market entry

Shanthy Gears

Products

- Manufacturer of wide range of critical components involved in power transmission process including gears, gear boxes, geared motors and gear assemblies
- Standard & Custom made products in Helical, Bevel Helical, Planetary and Worm segments
- Gears from a few mm dia to 3,200 mm dia with special focus on Gears and Pinions for Defense, Railways and Export markets
- Strong market presence in Worm Gear boxes & Worm Spares
- Focus industries – Steel, Power, Cement, Mining, Sugar, Off-Highway, Defense and Railways
- Re-engineering of existing gears and gear boxes
- Servicing of any make Gearboxes in-house / at site

Standard

- Worm Gear Boxes
- Helical & Bevel Helical Gear Boxes
- Geared Motors
- Planetary Gear Boxes
- Shaft mounted Gear Boxes
- Cooling Tower / Extruder / Rolling Mill Gear Boxes

Custom Built

- Loose Gears Spur / Helical Gear
- Pinion Shaft
- Internal Gear
- Worm and Wheel
- Straight & Spiral Bevel Gear
- Spares for Gear boxes
- Special Gear Boxes for industries like:
 - Cement , Mining , Power , Paper , Steel , Rubber, Chemical



Shanthi Gears

Services

- Health Check for Gear boxes
- Supply of spares for any make gear box
- Reconditioning of gear boxes
- Maintenance Contracts
- Conducting seminars to educate customers about maintenance of Gear boxes
- Offline Condition Monitoring
 - Visual checks for oil leak, oil level and its condition
 - Temperature check
 - Vibration & alignment check
 - Noise check
 - Inspection of internals
 - Report submission
- Online Condition Monitoring
 - Vibration
 - Temperature
 - Noise



Shanthi Gears

Infrastructure

- ▷ Six units located in and around Coimbatore
- ▷ One of the largest gear manufacturing facilities in India employing 600 highly skilled workforce
- ▷ The Company has following facilities available in-house:
 - Engineering and R&D
 - Foundry, Forging and Fabrication
 - CNC turning / machining , Hobbing, Gear profile grinding and testing
 - Heat treatment
 - Tool room for cutter manufacturing
 - Metrology & Calibration
 - Quality Assurance
- ▷ Power linkages :
 - Total sanctioned power - 6000 KVA
 - Captive Diesel Gensets - 6000 KVA
 - Captive Wind mill power - 6.66 MW
 - Captive Solar power – 200 KW
- ▷ Significant investments in IT infrastructure. Implemented a fully integrated Oracle ERP system
- ▷ Land available for future expansion



Shanthi Gears

Infrastructure – Engineering Facilities

Engineering Facilities

- Extensive in-house engineering facility, with a total strength of 40 engineers, experienced in providing optimum and comprehensive technical solutions for the last four decades
- State-of-the-art work stations with industrial leading CAD/CAM/CAE packages including- Solidworks, Autodesk Inventor, Solidworks EPDM, Cimatron, Kisssoft, AGMA gear suite, TK Solver, ANSYS, Cosmos, Pro-Mechanica, Gleason-TCA etc

Technology Center (R&D)

- Separate technology center (R&D), with a total strength of 10 engineers for continuing research, development and technology up-gradation activities
- Dedicated to introduce a world of new ideas, innovations and solutions for improved plant performance and product quality

CAD / CAM

- Engineering Design, 3D modelling & 2D drafting, Technology management and decision support systems, Generation of NC codes and post processing
- SGL's in-house proprietary programs (V-GEARS) and the industry standard document management system are few flagships of Company's API, Knowledge management & Decision Support System



Shanthi Gears

Infrastructure - Manufacturing Facilities

Equipped with latest CNC facilities for the entire manufacturing process consisting of:

- Turning
- Milling
- Gear Cutting / Gear Hobbing & Gear Shaping
- Keyway Milling / Broaching / Slotting
- Heat treatment
- Internal / External / Surface Grinding
- Gear Profile Grinding
- Casing / Housing Machining
- Joining / welding
- Radial drilling
- Assembly, testing, painting and packing is all done in-house

Most modern & largest CNC-controlled pit type carburizing heat treatment plant in India

- Built-up area of 30,785 square feet
- Pit type carburizing furnaces (9 nos.)
- Up to 2.5 meters dia
- 7 tons weight capacity
- Tempering furnaces (6 nos.)
- Quenching tanks (6 nos.) with 185,000 ltrs of oil
- Electrically heated pit type vertically sealed retort furnaces for gas nitriding and gas nitro - carburizing
- Vacuum carburizing furnaces
- Washing, Shot Blasting & Peening



Shanthi Gears

Infrastructure - Foundry Facilities

- ~ 30 years track record of proven quality in foundry operations
- Capacity of 3,000 tons of castings per annum
- Manufacturing of graded casting in Grey cast iron and SG iron with weights varying from few grams to 2 tons
- Centrifugal casting of Phosphor Bronze rings up to 1,200 mm dia and gravity die casting of aluminium
- Electrically operated stress relieving furnace of max weight 5 tons

Fabrication Shop

- Facility to manufacture single piece up to 10 tons
- CNC flame cutting machine – max 250mm thick
- Stress relieving muffle furnace
- Welding with ARC/MIG/TIG

Moulding Shop

- Modern machines like ARPA 900, Unitherm 450
- Single piece casting with maximum weight 2 tons
- Mechanised sand plant of 20 tons / hr mixing capacity

Pattern Shop

- CNC vertical machining center facility with 2D drawing to 3D modelling
- Wooden and aluminium patterns developed over the years exceed 20,000 in numbers

Forging Shop

- Capacity of 80 tons / month
- Open type forging for gears and shafts
- Plain forgings, ring forgings and step forgings
- Hammer capacity: 1 tonne
- Forging weight 500kg max size: 600mm dia



Shanthi Gears

Infrastructure - Metrology & Quality Control Facilities

Metrology & Calibration Lab

- To ensure the reliability of the measured dimensions, SGL has set up full fledged calibration facilities in-house
- Calibration lab is equipped with instruments like:
- Trimos Lab concept (0.3 micron accuracy)
- 50X Nikon computerised profile projector
- Zeiss contour checking
- Zeiss surface roughness tester
- Renishaw Laser Calibration Kit (Laser ML 10 and Ball Bar QC 10): Machine tool performance measurement and calibration systems with auto error compensation directly into the machine controller like Fanuc, Siemens etc.

Quality Control Facilities

- Strict quality control measures
- Measuring instrument calibration done in-house
- All the facilities in house to undergo various testing like:
 - Dimensional checking
 - Hardness Testing
 - Profile checking
 - Material Physical & Chemical properties checking
 - Non Destructive Testing such as Ultrasonic testing, Magnetic Particle Testing, Dye Penetrant Testing & Nital Etching Testing



Shanthy Gears

Quality Control

- The Company places significant emphasis on quality control measures
- Employs ~33 people in the Quality Assurance Department (QAD)
- In-house full fledged metrology & calibration lab to ensure reliability of measured dimensions
- Each order processed through Oracle ERP right from raw material purchase to final product dispatch and after sales service
- Each order has a Unique Identification Number generated by the system
- From the identification number complete history can be tracked including
 - Date of manufacture
 - Details of raw material used in manufacture of the product
 - Machines on which the product was processed
 - Heat number in heat treatment
 - Test reports
 - Inspection details from QAD etc.
- For each operation actual dimensions are entered in an In Process Inspection Report (IPIR) and approved by the QAD
- Due to strict quality control, warranty cost is less than 1% of sales



Shanthi Gears

Infrastructure - Clean Energy

Particulars	WM - 1	WM - 2	WM - 3	WM - 4	WM - 5	WM - 6	WM - 7
Make	Bonus	Bonus	NEPC	Suzlon	Suzlon	Suzlon	Suzlon
Output Power	320 KW	2 X 320 KW	2 X 225 KW	1250 KW	1250 KW	1250 KW	1500 KW
Installed	Mar 1997	Mar 1997	Aug 1995	Mar 2006	Sep 2006	Aug 2006	Sep 2007

Windmills

- Total wind power generation capacity of ~6.66 MW
- Wheeling agreement for power being wheeled to Unit C and Unit F
- Banking facility. Invoicing done at end of year based on the units not consumed
- Wind mills 1, 2 & 3 installed at Unit D and maintained by the Company
- Wind mills 4, 5, 6 & 7 installed on Company owned land and operated & managed by Suzlon

Solar Power

- 392 solar panels of 103KW capacity
- 414 solar panels of 100KW capacity



Shanthy Gears

Key Customers



Shanthy Gears Marketing Network



- The Company has a strong marketing network with 15 Offices across India with a strength of 50 sales / service engineers and a strong distribution setup

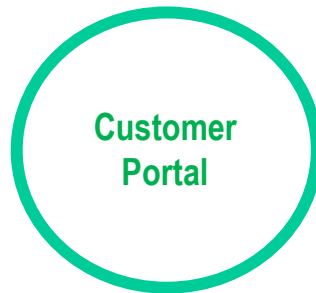


Shanthy Gears

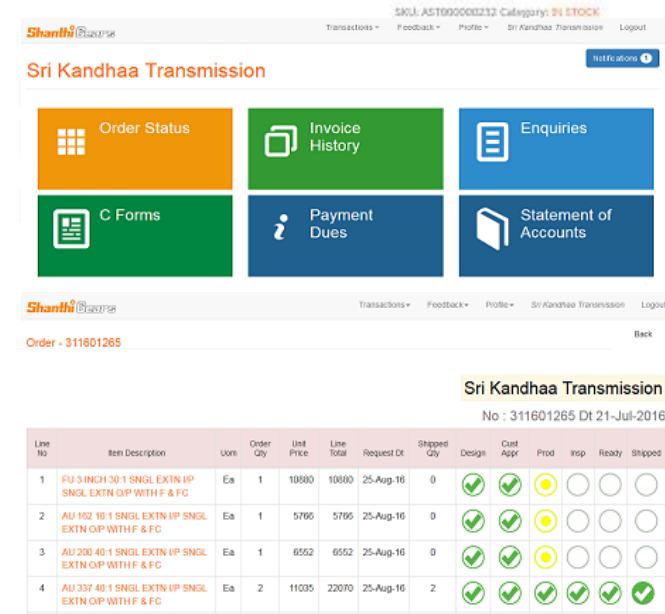
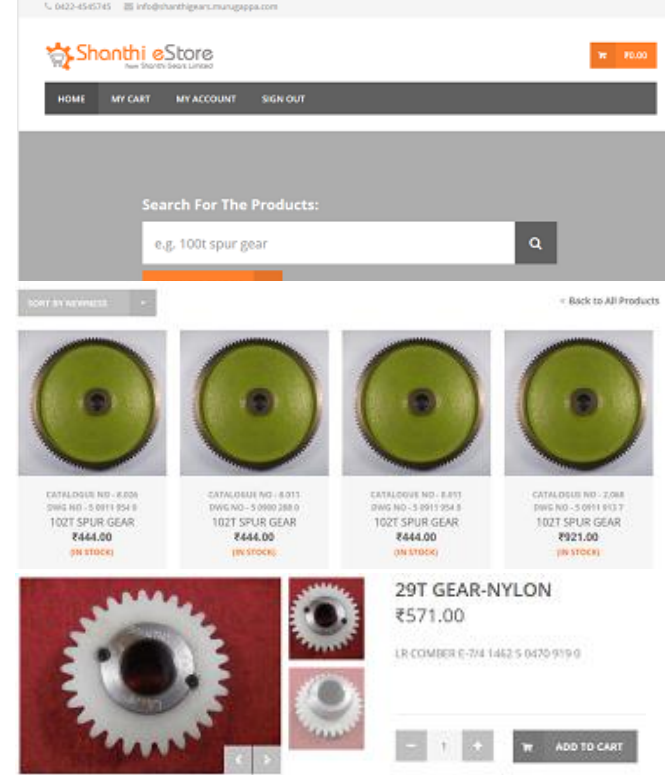
Going Digital



- Textile Gears on-line purchase
 - Order & Delivery status
 - For registered textile customers
- <http://estores.shanthygears.co.in>



- Customer self service portal
 - Order status enquiry, stage wise progress
 - Delivery & Invoice details
 - Account statements
 - Tax form status
 - Service Enquiry registration
 - Customer Feedback
- <http://cportal.shanthygears.co.in>



Because this Nation deserves the best of Gears and Gearbox solutions ...

You can find that our gears are driving aircrafts, trains, tractors, compressors, cranes, elevators, conveyors and machinery in almost every industry like cement, textile, power, steel, sugar, just to name a few.

Thank you

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