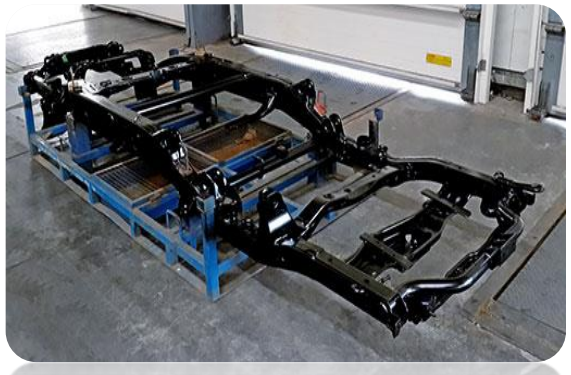
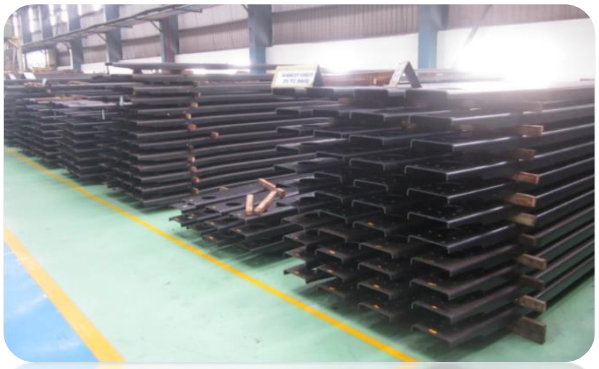




KLT

Section 1: About KLT

Automotive Chassis

About us

KLT Overview

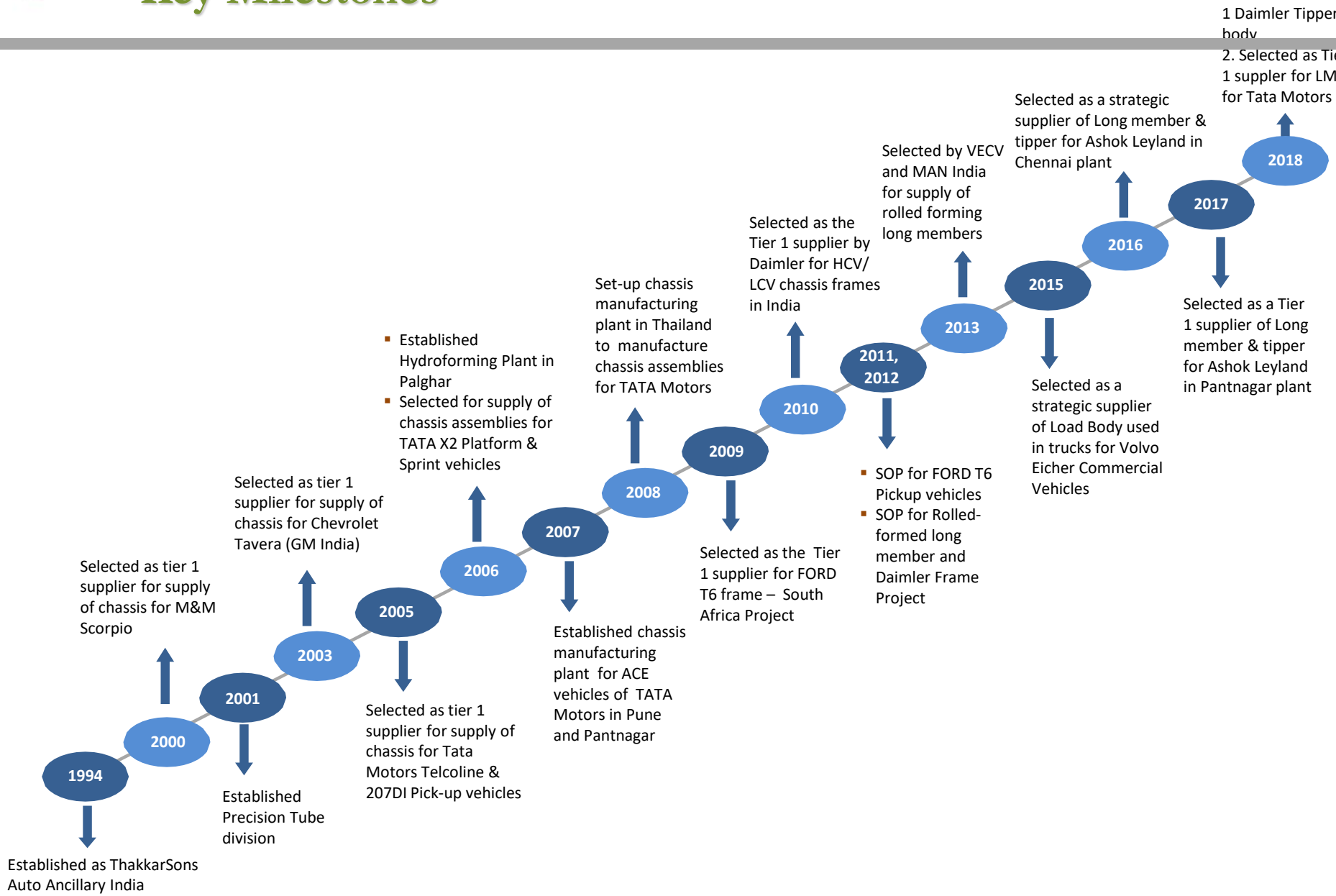
Company Overview

- Established in 1994 and headquartered in Mumbai, KLT Automotive and Tubular Products Limited (KLT or Company) is engaged in integrated manufacturing of automotive body chassis & related components
- The Company supplies body, chassis & components to leading Original Equipment Manufacturers (OEMs) in India and abroad. KLT supplies tubes to automobile and other segments like cycle, boiler and heat exchanger, electrical industry, including export markets
- KLT's key clientele includes large OEMs such as Ford Motors, Mahindra & Mahindra (M&M), Tata Motors, Volvo Eicher Commercial Vehicles (VECV), Ashok Leyland, Daimler, MAN Trucks, etc.
- KLT has six state-of-the-art manufacturing facilities in India located at Palghar(2plants), Pune, Pantnagar, Chennai & Indore
- Since 2011, KLT has a wholly owned subsidiary in South Africa named "KLT Automotive & Tubular Products (SA) Pty Ltd (KLT SA)" engaged in production of chassis at Pretoria, South Africa exclusively for Ford Motors. Sole manufacturer of chassis for Ford Motors in South Africa

Promoter Overview

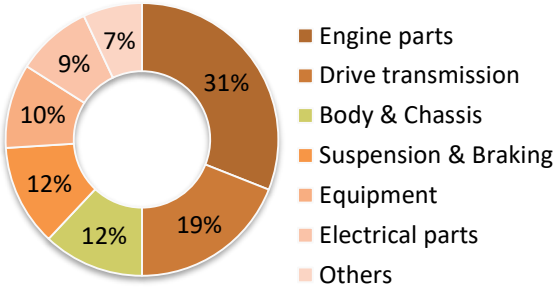
- KLT was promoted by late Shri Kishore L Thakkar who received award in 1977 from Government of India for developing steel along with Rourkela steel plant, to be used in Chassis frames for Indian Army vehicles like Shaktimaan & Jonga
- The late Mr Bhavin Thakkar, Chairman and MD of KLT is a pioneer in introducing the outsourced Chassis business to India. He received the Best Industrialist award in 1997 from Directorate of Industries, Maharashtra
- Mr Jubin Thakkar, The new Chairman & Managing Director of KLT is a Chartered Accountant by profession (merit holder), Cost Accountant and has a Diploma in Export Management
- Ms. Miloni Thakkar, The new director of KLT is a graduate engineer by profession and working with KLT from last 5 years for day to day activity.
- KLT is held 74% by the promoter group and the remaining 26% by Reliance Capital (5.9%), Enam Securities (5.9%), Rakesh Jhunjhunwala (5.3%) and other small shareholders

Key Milestones



Integrated Body & Chassis Player

KLT is an integrated Body & Chassis manufacturer with about 90% of the components manufactured in-house



- ✓ Indian automotive component industry is currently USD 39bn in size, of which body & chassis accounts for 12%, i.e., USD 4.7bn..
- ✓ As per ACMA, the share of body & chassis in the automotive component industry is expected to increase to 23% by FY2020 presenting a large market to be exploited by players like KLT
- ✓ The available market for body & chassis manufacturers would be much larger due to greater outsourcing by OEMs and reduced share of unorganised industry

Load Body

Components are further used in manufacturing of Load Body & Tipper

Chassis

Components are further used in manufacturing of Chassis

- Hydroformed parts
- Precision Tubes
- Other Components like Child Body Parts used in Chassis
- Roll-Forming Long Member (external sales only)

Components

Core Competencies uniting KLT products

- ✓ Sheet metal forming
- ✓ Processing of HR/ CR/ Galvanized Steel
- ✓ Motorman Robotic Welding
- ✓ Common Components across products such as Precision Tubes, Roll-formed parts, etc.
- ✓ Use of Hydroforming, Laser Cutting machines and Hydro-pneumatic assembly fixtures

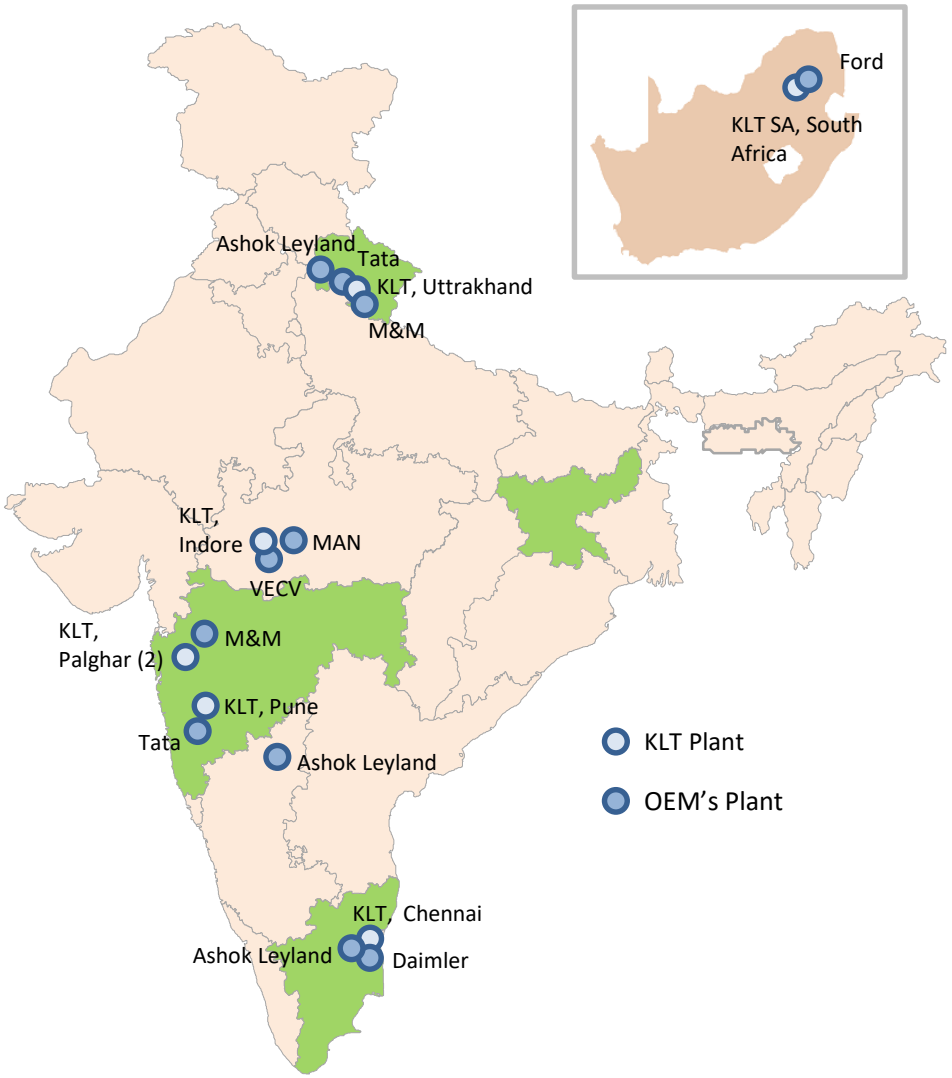
Leading OEM Clientele

More than 90% of the commercial vehicles OEMs in India are currently served by KLT

OEM	Relationship since	Products manufactured	Business description
Mahindra	1994	▪ Chassis ▪ Roll formed components ▪ Hydroformed Skirack Roof	▪ Sole Tier 1 supplier for most of the Chassis sold by KLT to the OEM (Utility and pick-up vehicles) ▪ Tier 1 supplier for roll formed long members to Mahindra Trucks & Buses Ltd (MTBL)
TATA	2006	▪ Chassis ▪ Roll formed components	▪ Sole Tier 1 supplier for most of the Chassis supplied by KLT to the OEM
VOLVO EICHER	2013	▪ Roll formed components ▪ Load Body & Tipper	▪ Tier 1 supplier for roll formed long members, load body & tipper to Volvo Eicher Commercial Vehicles (VECV)
ASHOK LEYLAND	2016	▪ Roll formed components ▪ Load Body & Tipper	▪ Tier 1 supplier for roll formed long members, load body & tipper to Ashok Leyland
MAN	2014	▪ Roll formed components ▪ Load Body & Tipper	▪ Tier 1 supplier for roll formed long members, load body & tipper to Man Trucks India
DAIMLER	2010	▪ Job work for assembly of Chassis ▪ Body Components & Roll formed components	▪ Supplier of body components to Daimler India Commercial Vehicles (DICV)
Ford	2009	▪ Chassis	▪ Sole Tier 1 supplier for all the variants of Ford Ranger manufactured in South Africa ▪ The only outsourced chassis manufacturer in South Africa
Tier 1 Suppliers and Dealers	NA	▪ Precision Tubes	▪ Supplier of Electric Resistant Tubes (ERW) and Cold Drawn Tubes (CDW)

Manufacturing Facilities

South Africa Map



Location	Plants	Products manufactured	Customers
Palghar (Shelvali, Vevoor)	2	• Chassis (Tubular & Non-Tubular)	• M&M
		• ERW/ CDW Tubes • ERW Tubes	• Dealers & Tier 1 suppliers • Captive consumption
		• Roll-Forming	• MTBL, VECV, DICV, Ashok Leyland,TATA
		• Hydroformed Components	• Skirack roof for M&M • Captively for Chassis
Pune (Urse)	1	• Non-Tubular Chassis	• Tata
Uttrakhand (Pantnagar)	1	• Non-Tubular Chassis	• Tata, M&M
		• Tipper	• Ashok Leyland
Chennai (Tiruvallur)	1	• Components	• Daimler
		• Tipper	• Ashok Leyland
Indore (Mhow)	1	• Load Body	• MAN, VECV
		• Tipper	• MAN, VECV
South Africa (Pretoria)	1	• Non-Tubular Chassis	• Ford

Section 4: ROLL FORMING DIVISION

Automotive Chassis

Transition From Pressed long Member to Roll Formed Long Member

- **History**

- In 1990 Volvo Sweden introduced roll formed long member for production of Truck chassis, that revolution was break point for truck chassis production because, prior to this, truck long member were made on presses.

Strength Of KLT

Make : M/s Stam, Italy

Advantages :

- Roll forming of high strength material having yield strength of 800 MPa
- Cycle time of 40 sets of long member per hour (Avg Length 9 Mtr) or 720 Mtr per hour
- High productivity & High accuracy
- Change over time required is 8-10 min. for each any section / thickness long member
- Profile thickness up to 10mm with high strength material grade.
- No additional cost of any engineering changes in section of long member.

Strength Of KLT

Laser Cutting Machine

Make : M/s Proteck, India

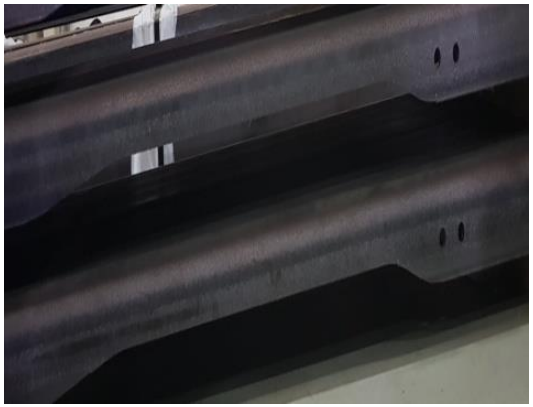
Advantages :

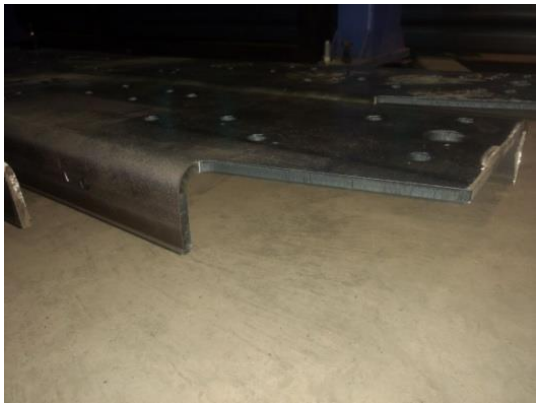
- Can do any diameter of holes in one set up
- IGS data can be fed directly to the machine
- High Accuracy between cluster of holes
- Profile thickness up-to 10mm with high strength material grade.
- Flexible in production as machine can laser cut any diameter of holes with any thickness and length.
- Highly précised fiber optics laser head system.

Benefits Of Laser System

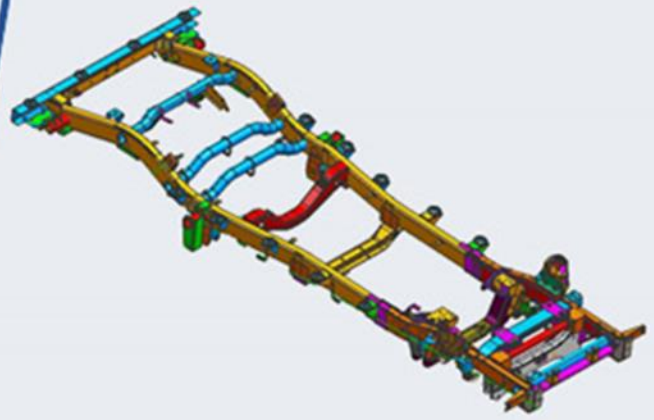
❑ Designing Freedom

- Profiles of any shape and sizes cut comfortably without the need of special tooling.
- No penalty of tooling cost for design change or selection of non-standard hole/profile shapes





Section 5: LOAD BODY & TIPPER BODY



Automotive Chassis

Load Body & Tipper ; KLT Chennai

Business Overview

- In Sept 2015 , KLT Automotive set up plant in Chennai for subassembly parts supply to DICV
- Jun 2016 SOP for SUPD & RUPD
- Mar – 2017 - Awarded M/s. Ashok Leyland Tipper Body – SOP
- Apr – 2018 - M/s. DICV Tipper Body – SOP

Manufacturing facilities

- KLT has a state-of-the-art manufacturing facility – Press line from 1000 MT to 160 MT & below complete range.
- The plant has a capacity to manufacture 2400 tippers for Ashok Leyland & 1800 for DICV

Area	Key Equipment
Paint shop	Paint shop with capacity 2400 tippers from AL & 1800 tippers for DICV
Weld Shop	MIG welding machines, arc welding machines and welding fictures
Utility	Air compressor, cooling tower, EOT Crane, transformer and generator , welding gas / CO_2

Load Body & Tipper : Pithampur

Business Overview

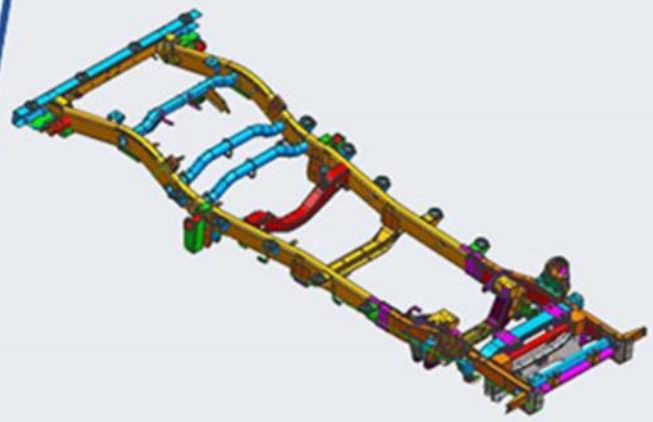
- In 2017, KLT Automotive set up the load body plant at Pithampur for manufacturing of load body for Volvo Eicher

Manufacturing facilities

- KLT has a state-of-the-art facility spread over an area of 2,4000 sq. meters on a land of 10,280 sq. meters plant in Pithampur
- The plant has a capacity to manufacture 2000 load bodies from 10.7 ft to 32 ft for Volvo Eicher
- The plant is having dip painting process with salt spray life of 500 hrs

Area	Key Equipment
Paint shop	Paint shop with capacity of 2000 load body and having expansion capacity upto 2500 load bodies
Weld Shop	MIG welding machines, arc welding machines and welding fictures
Utility	Air compressor, cooling tower, EOT Crane, transformer and generator , welding gas / CO_2

Section 2: KLT CHASSIS DIVISION



Automotive Chassis

Palghar Operations (Chassis Division)

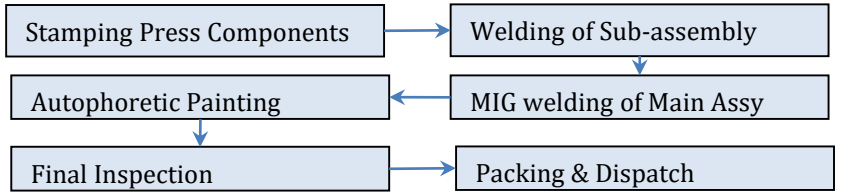
Business Overview

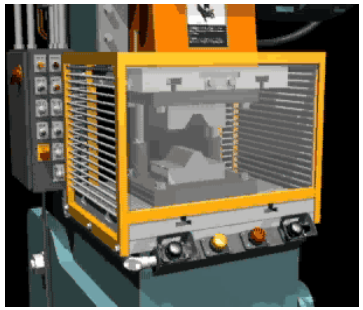
- KLT Automotive has 3 chassis manufacturing plants at Palghar
  - Tubular chassis assembly plant for Mahindra(ex-Scorpio)
  - Non-tubular chassis assembly plant for Scorpio
  - Commercial vehicle chassis long member plant
- Models catered to in utility vehicles and pickup trucks include Scorpio, Bolero, Maxx, Bolero Camper and Maxx Pick up Flat Bed
- In the commercial vehicles segment, KLT caters to truck chassis member requirements of Mahindra Trucks and Buses Limited (MTBL) (earlier Mahindra Navistar), Volvo Eicher and MAN
- The plant has ISO/TS 16949:2009 certification for QMS from BVQi

Plant	Area	Capacity
Tubular Chassis	1,984 Sq.m.	60,000
Non-tubular Chassis	2,899 Sq.m.	72,000
Commercial Vehicle Chassis	3,848 Sq.m.	60,000

Area	Key Equipment
Press Shop	Mechanical presses upto 50 tons, pneumatic presses upto 160 tons, shearing machine for upto 6 mm thickness, and 5 ton overhead crane
Paint shop	Autophoretic, Tanks for bath and box type oven
Weld Shop	Sub-assembly and main assembly fixtures, qualifying gauges, MIG welding machines, SSW and vessel tanks
Utility	Compressor, ETP, Boiler, Chilling Plant, R O Plant, D M Plant

Manufacturing Process Flow




Power Press 160 tons


Scorpio Robotic Welding Assembly


Qualifying gauge for final assembly


Chassis Assembly

Pune Operations (Chassis Division)

Business Overview

- Since 2005, KLT Automotive manufactures chassis systems for Tata Motors utility vehicles and pick ups at its plant in Urse
- Models catered to include Sumo Grande and Xenon in the utility vehicles segment, Tata Ace and 207 Di in the pick up vehicles segment and the cross-over model ARIA (X2)

Manufacturing facilities

- KLT has a state-of-the-art facility spread over an area of 9,642 sq. meters on a land of 75,900 sq. meters in Urse, Pune
- The plant is easily accessible from the Mumbai-Pune expressway as well as the NH4 (old Mumbai-Pune highway)
- The plant has a capacity to manufacture 72,000 chassis assemblies for Tata's models and has an ISO/TS 16949:2009 certification for Quality Management System from Bureau Veritas

Manufacturing Facility in Images

Area	Key Equipment
Press Shop	Presses upto 1000 tons , Electric Hoists upto 2 tons, EOT Cranes upto 5 tons
Weld Shop	Spot and MIG welding machines, Motoman Robot, sub-assembly and assembly welding fixtures
Utility	Compressor, Cooling Tower, Transformers

Pantnagar Operations (Chassis Division)

Business Overview

- In 2007, KLT Automotive setup the chassis plant at Pantnagar near Rudrapur for manufacturing chassis systems and components for the ACE model of Tata Motors

Manufacturing facilities

- KLT has a state-of-the-art facility spread over an area of 5,400 sq. meters on a land of 12,610 sq. meters in Pantnagar
- The plant has a capacity to manufacture 1,50,000 chassis frames for the pickup vehicle ACE and 12,000 chassis frames for M&M's UV Bolero
- Due to the commercial success of ACE, this plant saw capacity utilization levels of over 92% in FY11, while it stood at 69% in FY13

Key machinery installed at the plant is listed below

Area	Key Equipment
Press Shop	Mechanical press upto 100 tons, power press upto 200 tons
Weld Shop	MIG welding machines, arc welding machines, spot and projection welding, welding fixtures
Utility	Air compressor, cooling tower, EOT Crane, transformer and vacuum circuit breaker, generator , welding gas / CO_2

Manufacturing Facility in Images

Figures below show some of the key processes/machinery at the Pantnagar plant




South Africa Operations (Chassis Division)

Overview

- Established in 2009 and headquartered in Babelegi, North West Province, KLT Automotive (South Africa) is a 100% subsidiary of KLT Automotive and Tubular Products Limited
- In 2009, Ford launched a global T6 Pick-Up Programme for serving Asia, Europe, Africa, Gulf Nations, Australia, New Zealand and South America from three locations, namely Thailand, South Africa and Argentina. Ford had vehicle assembly plants at each of the three locations and therefore was evaluating three suppliers
- After discussions and presentations to Ford, KLT Group was awarded the business of chassis frame assemblies for the Ford T6 Pick-Up Programme covering the African region, following which, KLT Group incorporated KLT Automotive & Tubular Products (South Africa) (Pty) Ltd
- KLT identified a plant site and commissioned the plant in a record time of 18 months. The plant currently has capacity of assembling 110,000 chassis per annum for Ford's pickup model Ranger and has been operational since September 2011
- The product lifecycle of Ford Ranger is expected to be 12 years, of which c.2 years have passed. The product demand is rising and is expected to be at 85, 000 in 2013. It is expected that from 2014, the requirement will rise to 90,000 and cross 100,000 by 2015
- KLT SA has a broader business strategy to increase business in South Africa by introducing their products to other major automotive manufacturers in South Africa such as Nissan and Toyota

South Africa Operations (Chassis Division)

Manufacturing facilities

- KLT has a state-of-the-art facility spread over an area of 23,550 sq. meters on a land of 57,000 sq. meters in Pretoria
- The plant has a capacity to manufacture 1,10,000 chassis frames for Ford's Ranger model based on the T6 platform
- KLT SA developed more than 600 dies and tools and 90% plus automated robotic welding assembly line for chassis frames with an expenditure of USD 14 Mn, which was funded by Ford. This tooling, owned by Ford, is used and maintained by KLT SA

Area	Key Equipment
Press Shop	Mechanical presses upto 2,600 tons for manufacturing long and cross members
Assembly	Chassis assembly line from Techno Eight – AES, LK CMM machine for measurement, Perceptron
Weld Shop	Tooling and checking fixtures, MIG Welding machines, 74 welding motoman robots

Management and Team

- The South African operations are headed by Mr. Sarabdeep Hanspal , COO while the finances are managed by Mr. Shriraj Deshpande
- The plant employs 587 permanent employees and 126 contract staff, and has independent Managers responsible for Project, Robotics, Welding, Press shop, Quality control and assurance, Logistics and Maintenance

Manufacturing Facility in Images

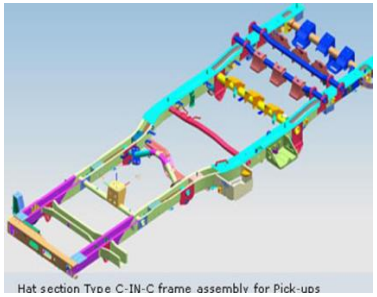
Press

Press

Welding Robots

Bending and Piercing

Perceptron Measuring System



Ford's Chassis Assembly

New Products Under Development

E-Cycle Frame Prototype

Integral Coach Factories - India

- **Integral Coach Factory, Chennai** - Integral Coach Factory in Perambur near Chennai consists of two main divisions. ICF Bogie were developed by Integral Coach Factory. www.ireps.gov.in

- **Rail Coach Factory, Kapurthala -**Rail Coach Factory at Kapurthala of Punjab is one of the popular coach manufacturing unit of Indian Railways. The factory has produced AC Sleeper Coach, Chair Car, Executive Class,Refrigerated Parcel Van and Post Office Coach.

- **Modern Coach Factory, Raebareli** -Modern Coach Factory of Raebareli in Uttar Pradesh third coach manufacturing facility of Indian Railways. Anubhuti coaches and LHB coaches are produced at the Rae Bareli coach factory.

ICF Product List :- RDSO\Fabrication Item List.pdf

- Web :- www.icf.indianrailways.gov.in

ICF – NPD Components

END Walls For LBH Coaches

Coach Fab SS Outer Door

ICF – NPD Components

Laccs Sidewall

Roof Sheet

ICF – NPD Components

Under Frame

SW Roff 1 Set

Thank You For Your Time & Attention

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