Radial Forging Machines

We Perfect Machine Tools Co. Ltd. having commenced our business in the year 1947. Besides our own manufactured products of Single Spindle Automatic Lathe Machine, CNC Turning Machines and CNC Grinding Machines, we also market many products which we do not manufacture.

We are the sole sales and services representatives for many of the renowned overseas and Indian machine tool manufacturers for the last more than 6 decades. Having served the large industrial sectors like Automobiles, Defence, Aeronautics with various advance machine tools equipments; we always pursued for most advanced and futuristic machine tools and manufacturing technologies.

Here we are overwhelmed to introduce the global giant in manufacturing forging machines, our Principals M/S GFM GMBH of Austria, as a manufacturer of specialized forging technology (Radial Forging Technology) machines since 1945. Having the large global market presence with more than 80% of the global market share till date, GFM has been the most reliable supplier to European and US Groups like GM, Ford, ZF-Steering, Carpenter Tech, Erasteel, GKN, Magna, Mubea, Daimler & Chrysler, Delphi, Hirschvogel, Muhr & Bender, VoestAlpine, ThyssenKrupp Bilstein, Vallourec & Mannesmann Tubes (global giant for manufacturing seamless tubes), Opel, etc. We already have 21 machines in India Special applications and Railways for Axles and recently 2 machines for automobile applications.

Summarized Advantages of these machines as –
• **Short Cycle Time** – Forming cycle time considerable less than machining time.
• **Improved Work Piece Quality** – Surface finish and dimensional tolerance.
• **Ideal Material Grain Flow** – Leads to improve impact and fatigue strength.
• **Material Savings** – Material not removed but formed, results higher material utilization.
• **Reduced Changeover Times** – Tool change within minutes, all process parameters stored in CNC.

• **Reduced Downtime Through Automatisation** – Full automatic production with CNC – load/unload with robot.
• **Fewer Manufacturing Sequence** – Simultaneous outside and inside contour, even with complex shapes.
• **No Temperature and Material Restrictions** – Both steel and non ferrous material can be processed at any temperature.
• **No Surface Preparation Required** – Depending on application, this technology does not need phosphating or even annealing prior to swaging.
• **High Degree of Uniformity** – Through ‘incremental deformation’ highest homogeneity.
• **Top Tolerance** – One can get H9 tolerance for OD and H7 for ID, for the components on these machines.

These Radial Forging Machines of GFM are very useful for manufacturing automotive components such as –

- **Drive shafts for Car, front- and rear wheel drive.**
- **Torsion Bars (Balancers) for Car Suspension system.**
- **Railway Axles.**
- **Intermediate shafts of Transmission system.**
- **Steering Columns, Valve body, Hollow shaft, Upper/Lower Shafts.**
- **Spindle Ends / Tube / Pipe Formed Ends.**
- **Axle tubes for small trucks**
- Hollow transmission shafts for automatic- and manual transmissions
Kalt-, Halbwarm- und Warmanwendung
Unsere Maschinen eignen sich für Werkstücktemperaturen von Raumtemperatur bis über 1000 °C.

 Weniger Gewicht und höhere Belastungsfähigkeit
Ermöglicht moderne Leichtbauweise mit Rohrwellen und Hohlkomponenten.

Werkstoffersparnis
Das Werkstück wird nicht zerspannt, sondern umgeformt. Eine deutlich bessere Werkstoffnutzung ist die Folge.

Innenkonturen mit geringsten Toleranzen
Dieses Verfahren ermöglicht die Herstellung von komplexen Innenkonturen in einem Arbeitsgang.