Fine Blanking - The Cutting Edge

Fine blanking differs from conventional stamping because

- Three separate forces are at work in the process (Shearing, Counter, Vee Ring)
- Close Die and Punch Clearance of 1% of material thickness

These factors combine to produce a cutting/forming action even on high strength steels.

Fine blanking produces close tolerance parts from materials of higher thickness. Cut edges are 100% free of tear and in most cases, parts are suitable for mechanical function without the need for subsequent machining. This technology enables production of "Near Net Shape" and even ready to assemble sheet metal parts.

Fine blanking as a process is technology intensive and requires tooling that is precise and accurate.

At TIDC, we have the required infrastructure that enables us to produce parts of thickness between 1.6 mm and 16 mm with close tolerances.

630 TON CNC SCHMID PRESS

The Material Edge

TIDC is in a position to source speciality steels, subjected to high temperature annealing for spherodisation. This input enables TIDC to produce components without any fracture or tear mark. The steels are procured depending on the end application and the range extends from 16 Mn Cr 5 to Chromium Vanadium Steel.

250 TON SCHMID PRESS

Infrastructure

Press Capacity

Presses of different capacities enable us to blank material of varying thicknesses.

- 250 ton Schmid Make
- 400 ton Schmid Make
- 630 ton Feintool Make
- 630 ton CNC Schmid Make

Secondary Operations

The fine blanking operation is followed by in-house downstream operations to produce finished products.

The Deburring machine is used to remove the burrs from the periphery of the parts.

The components are then levelled to the required flatness by the Levelling Machine.

400 TON SCHMID PRESS

630 TON FEINTOOL PRESS

DEBURRING MACHINE

Tool Room

Tooling forms the basis for fine blanking. TIDC has the expertise for manufacturing tool parts with a surface finish of 0.3 μ Ra. This provides a high degree of freedom in design options.

Tooling set up

- Presence of latest Generation AGIE CNC Wire EDMs
- Spark Erosion Machine
- Grinding Machine for Tool Resharpening / Maintenance
- Stress Relieving Furnace for Tool Parts

AGIE WIRE CUT MACHINE

STRESS RELIEVING FURNACE

SPARK EROSION MACHINE

COORDINATE MEASURING MACHINE

Metrology Facilities

- Coordinate Measuring Machine
- Profile Projector
- Linear Height Master

Close control over metrology facilitates production of precision tools and components.

LINEAR HEIGHT MASTER

Heat Treatment

A state-of-the-art sealed quench furnace enables us to achieve hardness of a specified band. The facilities for carburising and carbonitriding enables us to produce parts with optimum case depth, resulting in superior performance and life.

SEALED QUENCH FURNACE

We Work With

HONDA · BAJAJ · YAMAHA · TVS · ALSTOM · Valeo TRANSMISSIONS · BOSCH · TECUMSEH · KINETIC · pricol · varroc · KBX · EICHER ROYAL ENFIELD · BorgWarner Morse TEC

Product Range

For the Automotive industry

Two-wheelers

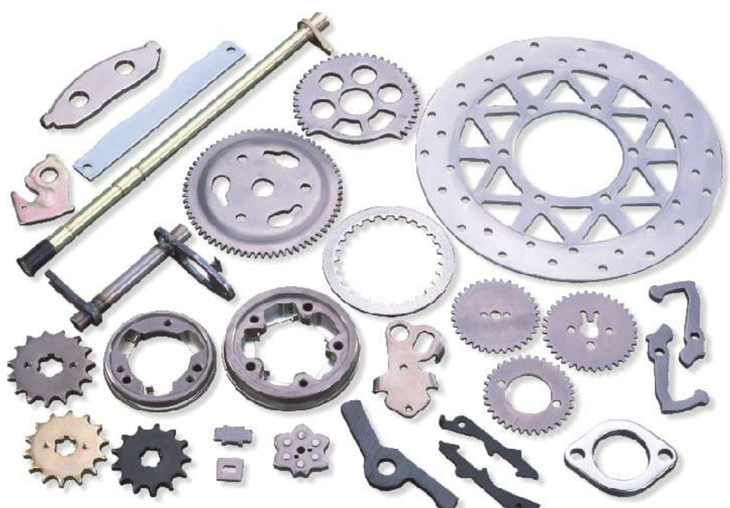
- Master Arm Gear
- Drum Shift Stopper Assembly
- Body Starter Clutch Assembly
- Arm Gear Shift
- Pawl Gear Shift
- Starter Gear
- Stop Pawl
- Sprockets

Four-wheelers

- Transmission & Engine parts
- Braking and Clutch System
- Seating System parts

Industrial Applications

- Electrical
- Textile
- Transmission



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