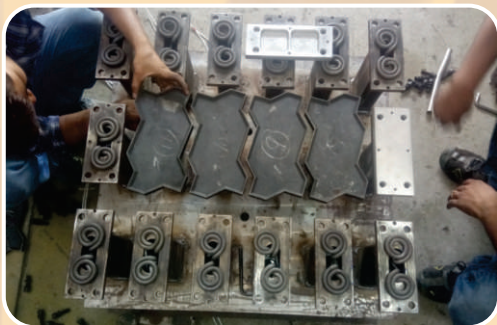
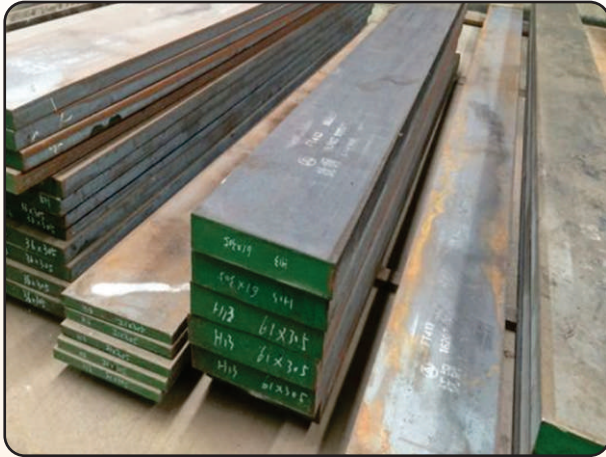




TRIANGLE ENGINEERING



Our Facilities



We use special die mould steel material, Which is forged with testing certificate

Machinery



- ▲ Vertical Machining Center (CNC)
- ▲ EDM Wire Cutting Machine (CNC)
- ▲ Surface Grinding Machine (CNC)
- ▲ Welding Machines.
- ▲ Heat treatment Furnace



Heat Treatment Processes

Case hardening

- ▲ Carburizing
- ▲ Nitriding
- ▲ Carbonitriding

Carburizing

- ▲ Carburizing is a heat treatment process in which iron or steel is heated in the presence of another material which liberates carbon as it decomposes, **at temperature between 850 and 950 °C, at which austenite, with its high solubility for carbon, is the stable** crystal structure. Hardening is accomplished when the high-carbon surface layer is quenched to form Martensite so that a high-carbon martensitic case with good wear and fatigue resistance is superimposed on a tough, low-carbon steel core.
- ▲ **Gears are almost always oil quenched because distortion must be held to the lowest possible level.**
- ▲ **After case hardening, the hardness obtained lies in the range HRC 58 to 62 but in heavily loaded gears a minimum of HRC 60 is required.**

Carburizing is a heat treatment process that diffuses carbon into the surface of a metal to create a hardened surface

Carbon is diffused onto the surface of the metal alloy

Done at very high temperatures

Nitriding

Nitriding is a heat treatment process that diffuses nitrogen into the surface of a metal to create a hardened surface

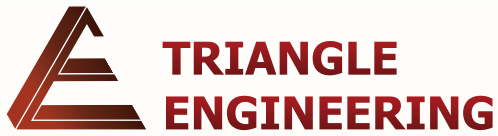
Done at low temperatures

Nitrogen is diffused onto the surface of the metal alloy

- ▲ Nitriding is a heat treatment process that diffuses nitrogen into the surface of a metal to create a case hardened surface. These processes are most commonly used on low-carbon, low-alloy steels, however they are also used on medium and high-carbon steels, titanium, aluminum and molybdenum.
- ▲ **Typical applications include gears, crankshafts, camshafts, cam followers, valve parts, extruder screws, die-casting tools, forging dies, extrusion dies firearm components, injectors and plastic mold tools.**
- ▲ **The processes are named after the medium used to donate. The three main methods used are: gas nitriding, salt bath nitriding and plasma nitriding.**

Carbonitriding

- ▲ Also known as dry cyaniding, gas cyaniding and ni-carbing.
- ▲ **Applicable** to steels with 0.3 to 0.4 % C.
- ▲ Surface hardened by addition by addition of carbon and nitrogen.
- ▲ Used to improve wear resistance of mild steel and low alloy steel.
- ▲ **Process:**
Medium: gas mixture consisting of 15% NH₃, 5% CH₄ and 80% neutral carrier gas
- ▲ **Quenching in oil** to avoid cracking.
- ▲ **Case depth** : 0.05 to 0.75mm
- ▲ Nitrogen is more effective in increasing hardenability as compared to carbon
- ▲ **Advantages:**
Surface hardenability, wear resistance and corrosion resistance better than carburising.
Longer times than carburising



DHAVAL PRAJAPATI
MANAGING DIRECTOR

TRIANGLE ENGINEERING is expertise in making all kind of Cement Concrete Moulds. like SOLID BLOCK, Cover Blocks, Kerb Stones, Paver Blocks, FLY ASH BRICK, HOLLOW BLOCK, BRIDGE retaining wall block (SAGMENTAL BLOCK) ETC. WE ARE engaged in manufacturing all kind of Moulds for Precast Cement Concrete Products. WE can also develop moulds as per your specifications and requirement for all your unique designs.

ALL MOULDS ARE MANUFACTURE IN AUTOMIZED MACHINE LIKE VMC MACHINE, EDM WIRE CUT MACHINE, SURFACE GRINDING.

WE USED LATEST TECHNOLOGY OF WELDING PROCESS FOR FEBRICATION,

OUR EXPERTISE IN TREATMENT ON METAL PROCESS, WE HAVE ACHIEVED 62-65 HRC. WHICH GIVES YOU LONG LIFE OF MOULD.

WE ALSO MANUFACTURE MOULD WITH HEATER SYSTEM.



:: ADDRESS ::

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