**Straight Line Wire Drawing Machine**

**Block And Cooling System:**

- Drawing drums are forged alloy steel, fully hardened and ground. The surface hardness is 58-60 HRC.
- Drums are internally water cooled with narrow gap system. Complete wetting of wall by highly turbulent motion of water, higher cooling effect with increasing drawing speeds.
- The drums are externally cooled by air from a single common blower through duct forming part of machine frame.

**Dies Boxes:**

- Dies are direct water cooled from a separate manifold and are loaded from top for quick fixing.
- Motorized rotating die holders can be provided; extra long to adopt standard pressure dies.
- Die boxes are equipped with motorized lubricant stirrer.
- Rotating die holders have single motor for stirrer and holder.
- Die boxes are adjustable in horizontal and vertical plane for cast and helix adjustment of wire.
- Die boxes are suitable for dry lubricants, large enough to store sufficient quantity of lubricant.

**Speed Control:**

- Speed regulation of each block is achieved through self centering sensor arm on which the wire is guided.

**Safety Guard:**

- Well balanced sheet metal guards, with transparent sheet/wire mesh to see through condition of machine, are provided.
- Guards are electrically interlocked not to allow running of machine with open guards.
- Sound proof guard for low noise level with suction of burnt powder can be provided.

**Transmission:**

- Motion transmission from motor to block shaft is achieved directly by V belt and pulleys or through helical gear arrangement.

**Intelligent Controls:**

- It is specially designed A.C. Three Phase Inverter Duty/Servo Motors L&T Supernova/Siemens 1ph7 constant torque up to base speed and constant power above base speed.
- Digital A.C. Three Phase Vector Flux Inverter Drives ABB ACS 800/Siemens Sinaemics provide the system with fastest communication through profibus.
- All blocks are working with a range of encoder feedback, thermal protection, flux vector controlled.
- The logic control is attained automatically by PLC system (siemens) automatically calculating reduction rate and monitoring all related dates.
• Utmost control flexibility allows any drafting program and drum skipping.
• HMI displays all function data making it easier for the operator to take control of the machine during production. Displays and memorizes the fault for easy diagnosis. Can be interfaced with remote computer to collect all information.
• Cubicles are sheet steel enclosures with IP54 protection, duly power coated and with exhaust.
• Electric control system provides a smooth acceleration from zero to pre-selected value.
• Normal stop is attained with ramp down control within 15 to 30 second. Emergency stop/quick stop is attained within 6 to 8 seconds. This can be achieved without a broken wire.