CLAIMS

What is claimed is:

1. A power time sequence conversion method for manufacturing products in batches, characterized in that: a common power is sequentially coupled with power input ends of a plurality of execution mechanisms in different time periods, so as to provide in time order a plurality of power drives required during a batch manufacturing process of products;

wherein the source of the common power is a total drive mechanism, and the power input ends of the plurality of execution mechanisms are respective tail end driving gears of a branch drive mechanism.

2. A power time sequence conversion device for manufacturing products in batches that uses the method according to claim 1, characterized in that: it comprises a total drive mechanism, a branch drive mechanism and a time-sequence conversion mechanism, the total drive mechanism comprising a total drive motor, a master transmission shaft and a master driving gear, the branch drive mechanism comprising a plurality of tail end driving gears, the time-sequence conversion mechanism comprising a conversion drive motor, a power-conversion transmission assembly, a tie rod, a slave driving gear, a slave transmission shaft and a change gear; the total drive motor is connected with the master driving gear through the master transmission shaft, the master driving gear is meshed with the slave driving gear, the conversion drive motor is connected with the tie rod through a power-conversion transmission assembly, the slave transmission shaft is mounted

eccentrically on the tie rod, and the slave driving gear and the change gear are both mounted on the slave transmission shaft, wherein the slave driving gear is meshed with the master driving gear, and the change gears are sequentially meshed with the respective tail end driving gears according to the time-sequence conversion.

3. The power time sequence conversion device for manufacturing products in batches according to claim 2, characterized in that: the tie rod is further provided with a brake.

4. The power time sequence conversion device for manufacturing products in batches according to claim 2, characterized in that: the power-conversion transmission assembly comprises a conversion transmission shaft, a first pulley, a transmission belt and a second pulley, the output end of the conversion drive motor being connected with the first pulley through the conversion drive shaft, the first pulley being connected with the second pulley through the transmission belt, the tie rod being connected with the second pulley.

5. A power time sequence conversion method for manufacturing products in batches, characterized in that: it allows a common power to be sequentially coupled with power input ends of a plurality of execution mechanisms in different time periods, so as to provide in time order a plurality of power drives required during a batch manufacturing process of products, or provide power drives in different forms such as movements and forces to the same execution mechanism in a relaying manner in two adjacent time periods;

wherein the source of the common power is a total drive mechanism, and the power input ends of the plurality of execution mechanisms are respective tail end

driving gears of a branch drive mechanism.

6. A power time sequence conversion device for manufacturing products in batches that uses the method according to claim 5, characterized in that: it comprises a total drive mechanism, a branch drive mechanism and a time-sequence conversion mechanism, the total drive mechanism comprising a total drive motor, a master transmission shaft and a master driving gear, the branch drive mechanism comprising a plurality of tail end driving gears, a clutch, a torque converter, and an output gear, the time-sequence conversion mechanism comprising a conversion drive motor, a power-conversion transmission assembly, a tie rod, a slave driving gear, a slave transmission shaft and a change gear; the total drive motor is connected with the master driving gear through the master transmission shaft, the master driving gear is meshed with the slave driving gear, the conversion drive motor is connected with the tie rod through a power-conversion transmission assembly, the slave transmission shaft is mounted eccentrically on the tie rod, and the slave driving gear and the change gear are both mounted on the slave transmission shaft, wherein the slave driving gear is meshed with the master driving gear, and the change gears are sequentially meshed with the respective tail end driving gears according to the time-sequence conversion; in the plurality of tail end driving gears, there are two tail end driving gears connected to the output gear through the torque converter, one connected to the torque converter through the clutch, the other connected directly to the torque converter.

7. The power time sequence conversion device for manufacturing products in batches according to claim 6, characterized in that: the torque converter is provided

inside with at least one pair of gear sets; and the tie rod is further provided with a brake.

8. The power time sequence conversion device for manufacturing products in batches according to claim 6, characterized in that: the power-conversion transmission assembly comprises a conversion transmission shaft, a first pulley, a transmission belt and a second pulley, the output end of the conversion drive motor being connected with the first pulley through the conversion drive shaft, the first pulley being connected with the second pulley through the transmission belt, the tie rod being connected with the second pulley.

9. The power time sequence conversion device for manufacturing products in batches according to claim 6, characterized in that: the change gear is connected with the respective tail end driving gears in a way of time-sequence conversion, with the plurality of tail end driving gears circumferentially distributed.

10. The power time sequence conversion device for manufacturing products in batches according to claim 6, characterized in that: there are nine tail end driving gears, which are respectively a plastication metering driving gear, a screw back-drawing driving gear, a die-opening driving gear, an ejecting driving gear, a die-closing driving gear, a die-locking driving gear, an injection-seat forward driving gear, an injection pressure retaining driving gear and an injection-seat backward driving gear.