CLAIMS

1. A toothed belt comprising:

an endless back portion;

a plurality of belt teeth arranged on a face of the back portion at predetermined intervals in a longitudinal direction of the back portion; and

a core made of an elastic knitted or unwoven fabric and embedded in the back portion, wherein

both of the belt teeth and the back portion are made of rubber,

the core is not exposed from inter-tooth portions which are located between the belt teeth, and

~~in the core, a difference between a position of a point that is closest to the belt teeth in a belt thickness direction and a position of a point that is closest to a back face of the belt in the belt thickness direction is limited to 0.5 mm or less~~

a waviness amplitude, calculated by subtracting a distance between a belt tooth tip and a lowermost point of the core in a belt thickness direction from a distance between the belt tooth tip and an uppermost point of the core in a belt thickness direction, is limited to 0.5mm or less.

2. The toothed belt of claim 1, wherein

in the inter-tooth portions, the core is covered with the rubber, and

the inter-tooth portions each have a flat surface or a curved surface.

3. The toothed belt of claim 1 or 2, wherein

the rubber is chloroprene rubber (CR), nitrile rubber (NBR), polyurethane,

chlorosulfonated polyethylene, silicone rubber, or ethylene propylene diene rubber (EPDM).

4. The toothed belt of any one of claims 1 to 3, wherein

the knitted fabric includes at least one of a wooly nylon yarn, a covering yarn made of polyester yarns, or a polyurethane yarn, and

the unwoven fabric includes at least one of polyolefin fibers, polyester fibers, aramid fibers, glass fibers, or nylon fibers.

5. The toothed belt of any one of claims 1 to 4, wherein

~~a spring constant of the toothed belt is equal to or greater than 0.5 N (0.5%, a width of 10 mm) and equal to or less than 250 N (0.5%, a width of 10 mm)~~ when a width of a belt is 10mm and a thickness of the belt is equal to or greater than 0.55mm and equal to or less than 5.00mm, a force required to elongate the belt by 0.5% is equal to or greater than 0.5N and equal to or less than 250N.

6. A belt transmission device comprising:

a drive pulley;

a driven pulley; and

the toothed belt of any one of claims 1 to 5, the toothed belt wrapped around the drive pulley and the driven pulley such that the belt extend between the pulleys.

7. The belt transmission device of claim 6, wherein,

at least one of the drive pulley or the driven pulley is a flangeless pulley or a pulley having a flange of which an outer peripheral edge is positioned inward relative to a position of the back face of the belt,

the toothed belt transfers a transfer target with the back face of the toothed belt.

8. A production method for a toothed belt, the method comprising:

applying a paste-like rubber component to a mold having recesses which correspond to belt teeth, such that the recesses are filled with the paste-like rubber component;

wrapping at least one first rubber sheet around an outer periphery of the mold having the filled recesses;

covering an outside of the first rubber sheet with an elastic knitted or unwoven fabric to serve as a core and being in an elongated state, the fabric having a ring shape of which a perimeter in a natural state is shorter than a perimeter of the mold;

wrapping at least one second rubber sheet around an outside of the core covering the first rubber sheet;

forming a cylindrical belt molding by vulcanizing or cross-linking the rubber component by applying heat to the mold, and

cutting the belt molding into rings having a predetermined width.

9. The method of claim 8, wherein

in the natural state, the perimeter of the core is equal to or greater than 50% and equal to or less than 62.5% of the perimeter of the mold.