Uni-TechSpace

CORE COMPETENCIES
January 2018
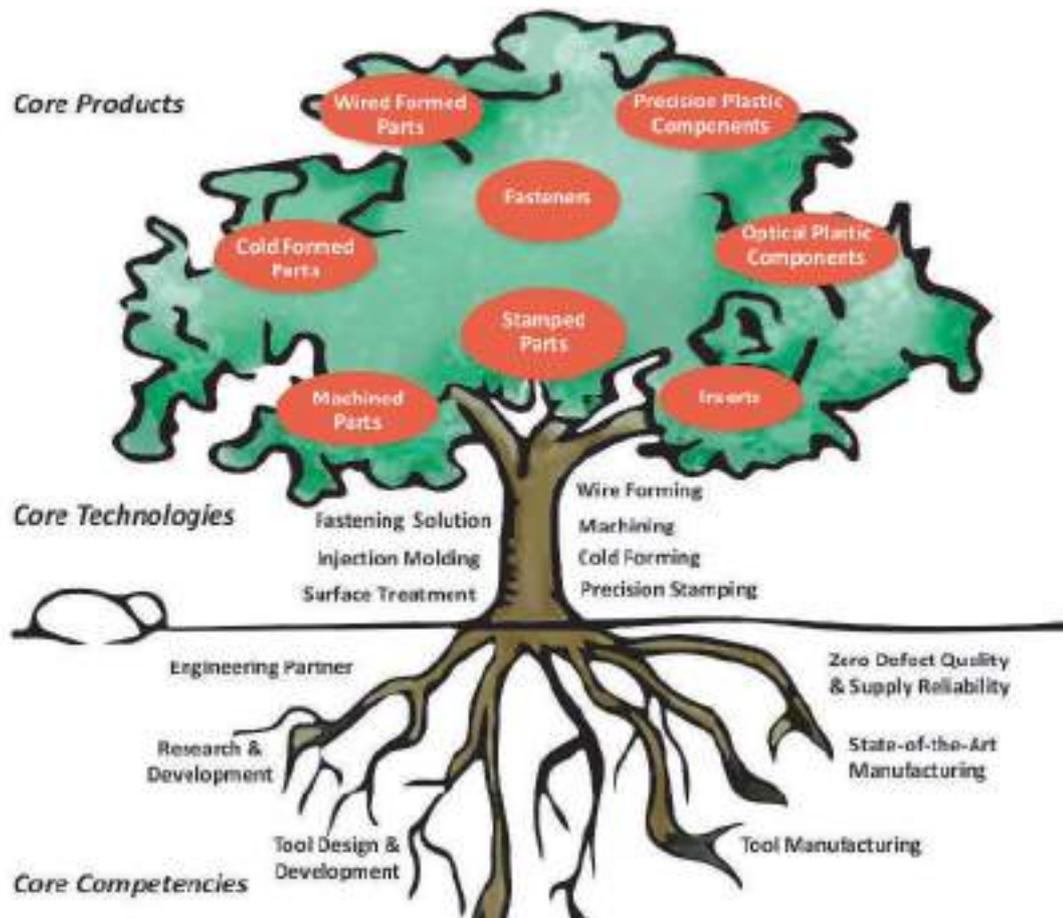
UNISTEEL®

The precision component specialist

Uni-TechSpace, which features a series of articles aimed at providing readers with a deeper understanding of Unisteel, has been revamped to create a more focused and pleasant reading experience for our readers! Starting from 2018, the biannual newsletter will cover a variety of topics ranging from general information about Unisteel to technical knowledge relevant to our products and capabilities. In the first issue of the newly revamped Uni-TechSpace, we are excited to introduce Unisteel's core competencies.

Unisteel Core Competency Architecture

On the campus of the Syracuse University located in New York, a group of amazing fruit trees known as the "Tree of 40 Fruit" stand tall. As implied by the name, the trees are able to bear different varieties of fruits such as peaches, apricots, plums, cherries, and even almonds! This incredible feat is achieved by artist Sam Van Aken via 5 years of careful planning, grafting and nurturing[1].

In 2017, Unisteel repositioned itself as The Precision Component Specialist. To better inform our valued clients on the products and services offered by Unisteel, the Core Competency Architecture, which takes the form of a fruit tree, was introduced. It consists of Core Competencies, Core Technologies and Core Products offered.

The "fruits" of the Core Competency Architecture are the Core Products that we offer to our clients. Unisteel has widely diversified its product offers into 8 categories, this includes fasteners, inserts, wire formed parts, cold formed parts, machined parts, stamped parts, optical plastic components and precision plastic components.

Fasteners

Inserts

Stamped Parts

Machined Parts

Cold Formed Parts

Wired Formed Parts

Optical Plastic Components

Precision Plastic Components

Just as a strong trunk is required to provide support to the branches that bear fruits, Core Technologies represent the manufacturing capabilities possessed by Unisteel for production of the Core Products. Since 1988, Unisteel has expanded its capabilities from solely fastening solutions to 7 state-of-the-art manufacturing technologies across its plants in Suzhou and Shanghai China, as well as in Johor Malaysia. These technologies are the solid backings to the unlimited possibilities of the products that Unisteel can offer to our clients.

Fastening Solution

Production of screws via cold heading and rolling

Cold Forming

Multi-stage, progressive cold forging of intricate components

Precision Stamping

Strips of metals are fed through stamping machines with multiple stations

Wire Forming

Coiling of wire to produce various springs and balance ring parts

Machining

Secondary machining operations for achieving high dimensional precision

Injection Molding

Fabrication of thermoplastic products by injecting melted polymer material into mould

Surface Treatment

Secondary-process operations such as electroless nickel plating, heat treatment, zinc plating, etc

Like the roots of a tree, Core Competencies build the foundations to the company's success. It is the basis for Unisteel's Core Technologies and the development of its Core Products.

Engineering Partner for Precision Components

Unisteel aims to be the engineering partner of choice for its clients. From design to manufacture, Unisteel provides a one-stop solution tailored to the needs of clients with many value-added services such as application engineering, product testing and on-site troubleshooting.

Research and Development

Unisteel's dedicated team of engineers from Technical Development (TD) and New Product Innovation (NPI) departments ensures all stringent engineering requirements of the products are met during the early product design stages. Some of the past successful projects such as Uni-Lube® and Uni-Seal® are now commercialised and readily available to our clients.

Tool Design and Development

In Unisteel, our team of highly experienced engineers designs various high quality tools for different precision components based on appropriate dimensions and tolerances, and the types of toolmaking processes and well-established industry standards and guidelines. These designs are then realised by proficient draughtsmen using 2D and 3D modelling software.

Tool Manufacturing

Be it tooling fabrication or maintenance, high-end equipment such as electro-discharge machines (EDM) and CNC milling and lathe machines is utilised. Having fully equipped in-house tooling capabilities ensures that we maintain a high level of tooling quality through tooling know-how while keeping tooling production costs in check.

State-of-the-Art Manufacturing

Every factory site of Unisteel is equipped with highly functional state-of-the-art manufacturing facilities and secondary treatments. This ensures prompt deliveries of high volume and a wide range of quality products to our clients.

Zero Defect Quality & Supply Reliability

Unisteel's quality assurance labs have testing and measuring instruments installed at the end of every stage of production line. Unisteel also implements statistical process control (SPC) to control critical dimension variations and automated Optical Inspection (AOI) machines for fast, automatic dimensional and/or cosmetic sorting of defective or non-conforming parts. Customers can have peace of mind as only products passing the examinations will be delivered.

All in all, the Core Competency Architecture is the cornerstone to Unisteel's success. It provides the company with an edge to thrive in an ever-evolving and competitive industry. Furthermore, it is useful as a guideline for Unisteel to work towards its visions, which are:

- Build strong partnerships with customers and suppliers
- Spearhead new innovations at a fast pace while remember our roots
- Be the industry leader
- Achieve world-class manufacturing efficiency
- Be accountable to our customers, communities, environment and employees

Hence, to reap the benefits, we must continuously make improvements to sustain and grow the Core Competency Architecture tree.

Ref 1: http://www.sciencealert.com/news/20142107-25892.html

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