

What is a new sales market, with a lot of potential to increase sales and profit, to introduce the products of Equiplite and how should the products of Equiplite be redesigned or adapted to fit into this new sales market?

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Background information:

Equiplite® is a company which designs, produces and sells sailing hardware. Their product range consist among other thing, swivels, blocks and connectors. With use of Dyneema® ropes Equiplite is able to engineer products which are up to 80 percent lighter than direct concurrents. Specific working loads are between 1 and over 150 tonnes. Equiplite wants to expand to other sales markets, therefore this Bachelor assignment focusses on that subject. The objective of the assignment was to determine which market could be the best to introduce the Equiplite products and after that, set requirements and find out how products should be redesigned to fit the new market. With this information, the products can be redesigned and the first prototypes can be build. This results in being able to have a short time-to-market in the nearby future.

Approach:

To find out which market could be interesting to expand to, the product features and applications of the current products are determined. Other sectors which fit to these, are mapped and market research has been applied on the linfting and lashing market and the market for personal climbing gear. With this research, the most promising market, the market for lifting and lashing, has been selected and meetings with an DSM where set up. This company could be an important shackle to the market in the future.

After the market was selected, a connector was selected as an example for the redesigning process together with DSM. The connector is based on a rope made of Dyneema which carries the load instead of metal because this material is much stronger than steel, the connector is very light. The standard connector is designed to connector to Dyneema ropes and would be redesigned to connect to a synthetic chain.

Research has been applied to the technical requirements. This research consisted among other subjects, a FMEA-analasis, a meeting with a big company which is likely to be one of the users in the future, research to legislation and research to dimensions and material. Also, research was applied to the appearance of the product. User-trust, the styles of Equiplite and the new market and complementary hardware where taken into account. With the requirements, which resulted of this research, a design process was followed consisting an idea generation, concepts, concept choice and concept refinement was applied to the product. The starting point of the design process was finding a new solution to lock the rope of the connector to replace the Velcro tape. Several other important requirements where also implemented in the design. The concept was made prototype-production ready to build a prototype which can be used for further research in the future.



The original connector (Equiplite, 2017)

Results and Limitations:

The lifting and Lashing market proved to be the best market to expand to. In this market is an increasing demand for lightweight products. With the products of Equiplite weight reductions of more than 90 % in weight are possible. However, expanding is only possible when the products meet the legislation of this market. This makes it harder for a fast and relatively cheap market introduction.

The dimensions of the connector have been adapted to fit the chain. To lock the connector when it is connected to something a new locking system which secures the rope of falling off and prevents it of getting cut by sharp things was designed. The design is based on a screw-on cap. The new connector, the 22-12 ENd™ is 75% lighter than the average D-shackle it replaces on the end of synthetic chains. Besides that, it makes it possible to load the chain to its breaking load and prevents it of getting damaged on the connection surface.

Conclusions and recommendations:

The lifting and Lashing market proved to be the best market to expand to.

The connector is redesigned to fit the market. All modifications of the connector seem to work on first sight on the prototype. However, they will have to be tested and detailed calculations must be made. After this first testing period, some things might have to be adjusted. After that, the certification test has to be done before the product is ready to enter the market.

References:

Equiplite. (2017). NS Connector. *Catalogue 2017*, p. 14-17.