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FUNCTIONAL KINITTING FOR CHILDREN SEGMENT: THE “DRY BABY” BODY

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ABSTRACT

The aim of this work is the development of a knitting product, specifically designed to present a functionality, more exactly a moisture fast flow. For this purpose, the textile materials and structures have been selected according this functionality and its suitability for use. The knitting structure was developed with Shima Seiki CAD system, and the product is a children body. Also, a collection was developed with the designation of “Amigo Imaginário”.

INTRODUCTION

The present work aims to develop a product mesh, specifically designed for the same, covering design and functionality, particularly with regard to the fast flow of moisture. For this purpose, we selected the textile materials according to the desired functionality and its suitability for use, the mesh structure being developed with the aid of computerized CAD system manufactured by Shima Seiki.

It is a multidisciplinary project, which developed within the courses of the Master in Fashion Design at the University of Beira Interior, as the discipline of Fashion Design Project I, which has developed the collection, Textile Design and Development, where it created a collection of fabrics and Fashion Marketing and Communication, where developed the marketing plan and Brand Communication and Design and Development where he developed knit structures.

It is a product intended for the child's universe, the collection being developed with a focus on representation of the brand Amigo Imaginário the virtual marketplace with the launch of a sales site, and where his first collection entitled Zummm referenced in the film "Bee-Movie - the story of a bee" and also to launch an innovative product in the children's market: the body "Baby Dry".

BRAND PRESENTATION

The Amigo Imaginário brand, working with the children's segment, offering excellent quality products, distinctive finish (encourages new discoveries), surface manipulations (stimulates the touch), playfulness (provides fun) and creativity (promotes a child's imagination) and second their concepts, "the fantasy expands the imagination," the younger the child, the greater the ability to fantasize, since the lives of adults and even children, is an eternal routine, the role of imagination is to break this routine.

It is on these grounds that the mark Amigo Imanginário is sustained. Fantasy and imagination are also the formula for success of Disney products. However, in addition to a marketing strategy, this formula inspire children since man is man, is rooted in our nature, it reinforces the children's dreams of adventure, to explore the world.

Over the years and the advent of new technologies and ways of life, where the child is encouraged to think less and less imagination and fantasy resume their importance. The

purpose of the brand is always to keep this concept alive, taking the classic style childhood, which the bases will never change, children are always children.

According to the BabyCenter Medical Advice of the Brazil, "The imaginary friend is a character created by children 2-5 years old. The purpose of creating such a friend is to assist the development, understanding of facts and the development of feelings that occur in different situations, functioning as a refuge or an escape. Children who have an imaginary friend are generally more intelligent, as it turns out to influence its development, and they also have more "mystical content" in your dreams. Thus, their fanciful imaginations are richer than children who do not. "

PROJECT DEVELOPMENT

Public Target

Consumer Public

One can consider the parents as the buying public, who need to be captivated by the different elements that already exist in the market and justify the purchase of products. So are young professionals from various fields, but with good artistic sensibility, innovative and dynamic personality, and who like to have choices in their ultra-modern and vintage, are devoted parents, who always think in a family structure, like art, cinema and theater presentations considered 'Cult', are residents of large urban centers but are good moments of rest in bucolic and natural environments, have good financial stability for travel, technology purchases and market news. As illustrated in Figure 1.



Figure 1 – Panel of the Consumer Public

User Public

It is the child who chooses the product by the visual aspects and attractive. Are girls, zero (0) to five (5) years old, as illustrated in Figure 2. Active, creative and enjoy the universe of the colors; share moments with her parents in theaters, outdoor parks, entertain themselves with technology, but have a lot more dynamic play of the time of their parents, are well educated and know behave in restaurants, travel and where necessary, like to surprise and also want play in the clothes, create imaginary worlds to move its amusing moments.



Figure 2 - Panel of the User Public

Collection Characterization

Release

The collection Zummm the Amigo Imaginário brand brings reference to the movie "BeeMovie: the story of a bee," which portrays the life and the world that exists inside a beehive, with all the secrets screened for the production of honey. As the hive, the collection brings surprises hidden in the small details.

The prints are colorful and geometric, often appearing on the inside of clothes like the linings and the bodies, allude to the combs of the hive, plants and flowers pollinated by bees. The mesh and fabric are produced with different textures of wires and structures designed to to evidence and approach of this world.

Their shapes are rigid, structured and with organic elements, which refer to the life and organized ruled bees honey production and implementation of the honeycomb, as a large business running. The clothes have a versatile construction, structured in layers that have hidden details with interference on the tissue surface, showing the structure of honeycombs. They are pieces that allow modifications and transformations, leading the child to the exercise of imagination and coordination with elements strategically placed for easy manipulation of the child.

It is a dynamic collection, magic and environment, able to take the child to discover and create new worlds possible, shown in Figures 3 and 4.



Figure 3 – Concept image of collection



Figure 4 – Full Collection

Product Presentation – body “Dry Baby”

The Amigo Imaginário brand proposes to market an innovative technology in the construction of the mesh fabric used for the manufacture of bodies.

The Body has therefore two types of knitting and textile materials: on top, the waist to the collar is made with the purest organic cotton, which does not harm baby's delicate skin and has three distinct structures, represented in figure 5, to distinguish the body, the bottom is made of a double mesh, formed by two layers of different fibers, still outer layer the same cotton, however, the inner layer provides barrier of the recycled polyester, obtained from recycling of PET bottles, which, being hydrophobic, facilitates the transport of moisture that leaked from the diaper to the outside, keeping your baby drier and protected. (GERALDES, 2000)



Figure 5 – Three different knit structures

Experimental Development

Project

Create a body which has a built-in feature, namely, that meets the needs of babies in relation to excess urine, which in some cases of diaper leaks during use.

The main idea is to make a mesh structure, with two distinct and separate layers in the diaper area, where the inner layer, which will be in contact with the diaper, is polyester and a second layer, which lies to the outside of part is made of cotton.

The polyester, hydrophobic (possessing a regain of approx. 0.4%) and with a more open mesh, acts as a separating layer, ie the outer layer of hydrophilic cotton (possessing a regain of approx. 9%) 'suck' the moisture for to the outside part, preventing the baby's skin stays wet. As mentioned above, the polyester used was developed by recycling PET bottles, inserting

another concept, the concept of environmental responsibility. Is displayed in white, in all colors of bodies, not requiring dyeing synthetic and consequent harm to environment. (FONSECA, 2005)

The cotton also is environmentally responsible, organic, produced without the use of environment aggressive pesticides and dyed with natural dyes Brazilian flora and fauna (Figure 6). (FERREIRA, 1997)

The dyes used in obtaining the different colors, were:

- Color red: extracted from the cochineal insect
- Color orange: extracted from the catuaba fruit or from the annatto seed
- Color yellow: extracted from the leaf of the quaresminha do campo
- Color brown: extracted from the fruits of the pinion seed or from the pomegranate seed
- Color green: extracted from the alfalfa sprouts



Figure 6 – Raw Materials and Resulting colours

Source: www.tingimentonatural.blogspot.com

CAD System

The CAD system (Computer-Aided Design) used is the Shima Seiki, and it is an information medium used for the development and design of meshes per frame, allowing the creation of patterns of different structures and their preparation for knitting such as the action codes machine, number of points, selection of the thread guides, codes of repetitions, and other factors that provide the best result in the application of textile materials involved.

It is a system that dramatically improves the efficiency and quality of production from its database where are stored all the projects developed for possible future use as well as its connection with weaving (knitting machines) and their demanding standard quality and technical reliability, planning, productivity, ease of use, cost / performance and evaluation of production.

Knit Structures Development

Another important step was to create a mesh that could convey the idea of a honeycomb, inserting not only change but also points to evidence a great relief in the knit. Created three different mesh structures, two of them building simpler, more accurate and no major problems in implementation. The third was more complex and requiring more testing.

Experiments

The development of knit structures used in the characterization of this project has gone through several phases, represented by the figures of (A) (L), namely:

- The relief textures that create the knit were performed only with alternating points jersey inside out, and point to the right jersey pearl, but the desired effects were not very evident.



(A)

- The texture was changed to a structure with tack, and became more evident relief, but the design was not shaped like a hexagon or octagon that was the purpose originally intended.



(B)

- The desired hexagon or octagon has now turned into something like a square.



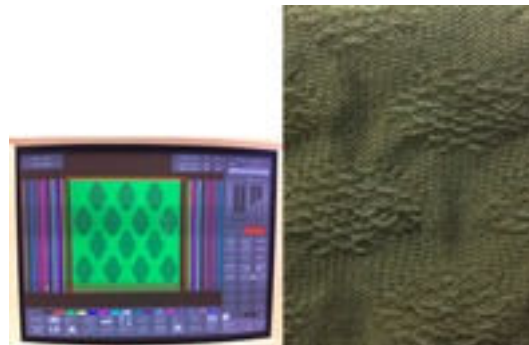
(C)

- The format has achieved the goal, but highlight the need for relief was still a goal to be achieved.



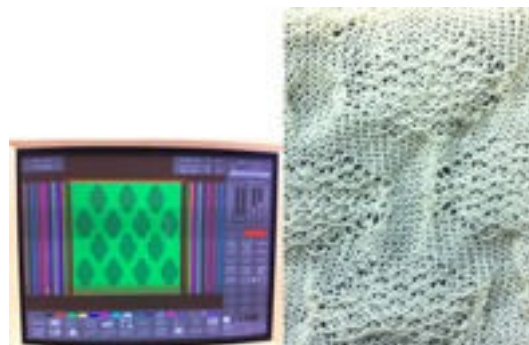
(D)

- The fund was reversed in the hope that the relief is slightly more pronounced, but not reached expectations.



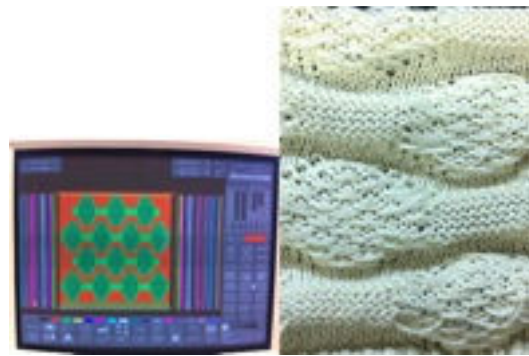
(E)

- Was tested in thinnest wire.



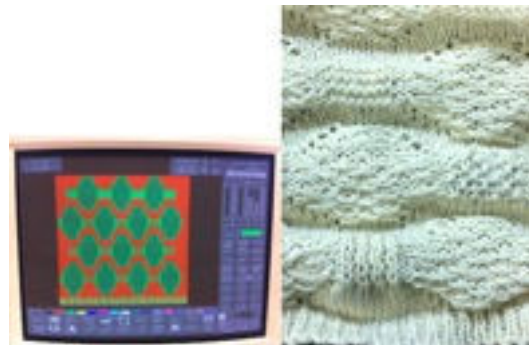
(F)

- Changed, therefore, the space between the hexagons, inverting for the reverse jersey. The result has not been satisfactory.



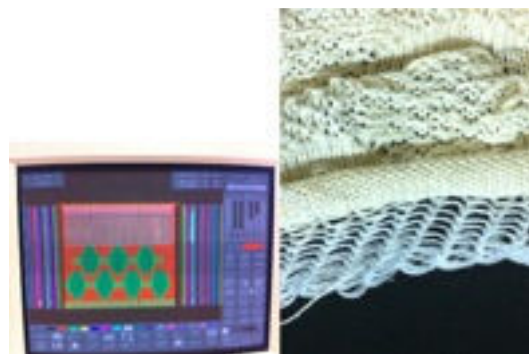
(G)

- Also, there was not a model that fully satisfy the expectations, but we opted for one of the changes.



(H)

- Option end, as with the insertion of the double loop. Although at the beginning, the programming problems presented and the double knit would not be tied.



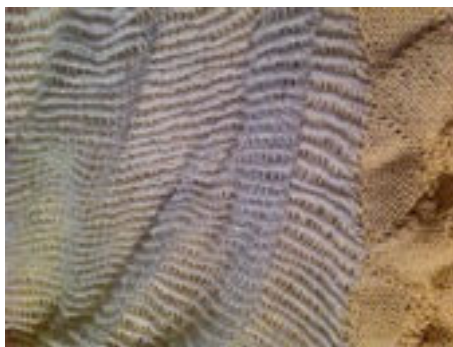
(I)

- After some adjustments, set up the knit and the layers were linked.



(J)

- When running in real size, the inner layer of polyester, was fragile, and grew much more than the cotton knit. However, new tests were started.



(K)

- Finally, put to some points of connection between the knit of cotton and polyester, in designs that resembled the honeycomb and so also the polyester mesh would be more stable and would not stay in excess.



(L)

Technique Plug

The following presents the technique plug of the developed product.

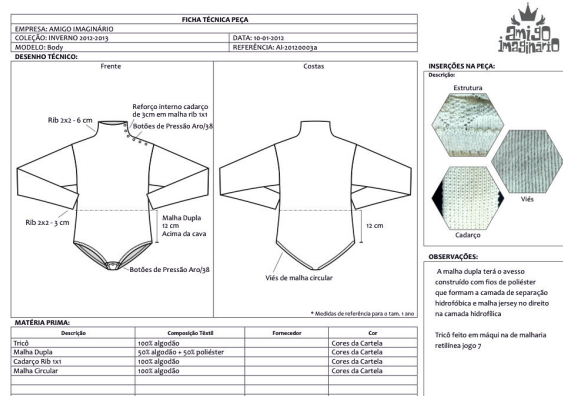


Figure 7 – Technique Plug of making of the body

Product

The final developed product which follows is presented in Figure 8:



Figure 8 – Cloth made, vision of the two different knit

FINAL CONSIDERATIONS

The objective of this work was to create an innovative product on the market that could have a functional appeal, sustainable and balanced aesthetic. For each of the goals were drawn forms and procedures that contribute to the satisfactory outcome, since the choice of themes, structures, materials and functions, meeting in a product which, in its making, was not aggressive nature and carry a strong charge of sustainable components from start to finish of the production chain.

Costs of the industrial production have not been evaluated, and therefore does open a new research area in its construction with different knits, using the process seamless and other materials that give it even more features.

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