

## EXPLORATION OF PLASTIC PVC MATERIAL FOR JEWELRY ACCESSORIES

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### Abstract

PVC plastic material has the potential to be used as raw material for functional products, especially jewelry accessories products. The material has a characteristics, then the processing of raw materials should take into account the characteristics of its peculiarities. Through the material exploration approach, the potential can be extracted so as to produce non-conventional raw material products that have equivalence value compared to existing conventional raw materials. The exploratory approach to pvc plastic material is very appropriate for generating alternative modules in material experiments so that it can be varied in determining the potential modules in its application in jewelry accessories products. The experiments were carried out with recognition stages by giving physical treatment to bring up the initial characteristics in stages until the determination of the character of the structure on the material. The resulting products such as accessories are clear evidence that through the material exploration approach can be obtained creative opportunities for the development of products that have commercial potential, so it is expected to be utilized as an alternative in the appearance dominated by conventional materials. Through this research, the characteristic of pvc plastic material can be utilized into various jewelry products because of its uniqueness, so it can be an alternative raw material to enrich the potential of non-conventional materials of plastic materials optimally.

*Keywords: Exploration, Plastic PVC, Creativity, Accessories.*

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### 1. Introduction

Understanding materials in depth is important, though not thoroughly. This is the best way in character tracing with special treatment and is applied in a design process. The perspective in terms of materials can be seen from various perspectives, depending on their interests and needs, to meet certain activities. Material can act as a 'determinant' because it is one important part of a design process, so it becomes one of the considerations in determining a design. However, the search for material characteristics can begin with the material as raw material or finished material.

PVC or polyvinyl chloride plastic material is one of the most commonly found ingredients in functional products, such as cling wrap, toys, water hoses, building pipes, plastic tablecloths, bottles and so on. With a variety of applications, in this study I restricted to take a material that has become a functional product, to be used as experimental raw materials, ie a water hose or a flexible water pipe. In addition to considering one character of the material, PVC hoses can be used as an alternative material to be used as raw materials in the process of designing functional products. This can be done in the design process by using one of the design methods of material exploration with the 'design by doing' approach.

According to Walter Gropius in the book Andry Masri (Creative lamp unique from unused materials, 2011) the approach of 'design by doing' is an approach that can be used to obtain many opportunities with the possibility of new forms of a design work. This will be applied in our research to obtain these opportunities with pvc materials and applied in one particular function as case studies, such as jewelry accessories. The design concept of jewelry accessories can elicit a considerable potential for the possible possibilities of unique forms that arise because of the physical treatment response of material exploration experiments.

## 2. Methodology

Beginning with an understanding of material characteristics by giving physical treatment of the material. Various kinds of physical treatment of the material, will impact physical changes or visual response in accordance with the character of the material. The variety of responses that appear in the physical treatment is in addition to being influenced by the material itself, as well as the tools used in the experiment, will have an impact on the outcome of the treatment. Even the individual who performs the process affects the response that arises as a result of the treatment with certain tools, and the treatment of sorting and selection of response results aesthetically. Because individual experience affects the object of processed material, which should be resisted to 'form' the object of processed material.

Material exploration method in the creative process to get the most optimal form of the material, which is trying to observe the visual characteristics it contains, its structural characteristics, to its dimensional characteristics, by the method of 'design by doing'. this is done because this method is very practical rely on work attitude, designing directly on the object of study to get a design work (Visual Strategy, Andry Masri, 2010). The targets resulting from this approach are to produce works that are unique and / or different from their experiments, from the impact of visual treatment of the material (response) captured visually.

Important to note also in the stages of material exploration is in the intelligence of creativity and emotion. According to Tony Buzan (Head First, 2003) in creativity intelligence, to 'dare to be different' must think in new ways to produce original, including fluency (creative ideas), flexibility, authenticity, and expanding ideas. Sometimes the condition is often neglected because it is unable to 'control themselves' in overcoming the conditions of the search process and decision-making, such as disconnecting the module used from the material response of the physical treatment at the beginning, and overly satisfied the physical treatment of the material with a limited (monotonous) sustainable. So it must be overcome by the brainstorming to optimize the required results.

## 3. Result and Discussion

Initial experiments in this study led to the introduction of objects with various treatments and treatments that were considered to know the characteristics of the elastic water hose, with a focus on joint experiments.

A joint experiment is a joint research conducted by a team of researchers and undergraduate students of level one and conducted on lectures at private universities Bandung, Department of Product Design, 3 Dimensional Nirmana courses. The theme used in the lecture is about basic design. From this joint experiment try to dig the material potency of each plastic processing from one of its project that is elastic water hose material.

The treatment of objects in the introduction phase experiment is not limited by the equipment in the experiment. But for the type of material is limited certain elastic water hose type. This joint study is required to conduct experiments with the treatment of elastic water hose material objects with simple tools (manual) and semi-masinal equipment. With a variety of physical treatments with different tools is expected to bring the potential with different and unique results of each individual.

Elastic water hose can be obtained in various places such as markets or material stores. With the exploration criteria of materials in each individual, it should not produce the same response or with the same module, although different treatment or otherwise. The impacts arose because these early stages, still searching and trying to produce a different response from the object under study. Without the pretensions of such treatment outcomes, any results are deemed to have potential to be developed. Experiments with the same treatment with different tools will produce different responses.

To understand the character of the material requires direct experimentation, because with a direct touch with the five senses to produce a better response. The treatment of objects continuously, indirectly can communicate well with the object that we thought, and generate various responses.

Every individual has previous experience in producing a work. But when meeting with something new, what is often done is to bring the experience as a test material. The initial process in material exploration should precisely dampen the experience so as not to get stuck with the experience to generate new responses from new materials. This is not easy because it takes time to recognize and understand a character by experimenting directly and gaining new experiences from the object under study.

When the experimental results get various responses, then the development of a module to be re-processed to be made three dimensions. Processing into three dimensions requires stages in the study of structures and dimensions corresponding to the material's visual response. Three-dimensional structure can be done with various materials and varied material. Various kinds of materials available, not necessarily all can be in accordance with some modules. It takes an experiment to understand the three-dimensional structure of each module produced with the help of experience and reference library data to enrich its experimental results. The functional products used as the case in this elastic water hose exploration experiment are directed as jewelry accessories.

The exploration results of these materials with some unique forms, can be seen the possibility of the resulting bid through three-dimensional form experiments to produce aesthetic value. Design considerations are made by looking at the results of material exploration and can be compromised on functional products. The possibilities offered can be made, by making a functional product mapping tailored to the characteristics of the material. The design concept is planning the completion stage of the three dimensional form to get better visual quality and optimal by taking case study from mapping result.

Bids generated through the experimental results of elastic water hose material can present a wide range of possibilities and virtually any possible product mapping can be considered to be utilized in the refinement of a three-dimensional form. However, there should be priorities that can be considered to focus on being a case study of a functional product. Adjustment of the final three-dimensional form of experimental results should be taken into consideration in the selection of case studies to facilitate the selection of functional products.

#### **4. Conclusions**

Plastic PVC elastic water hose can be used as raw material in the process of designing a design work, especially jewelry accessories. Looking at the design aspects and approaches there are still not utilized by us, if only as the main function of the hose water. Elastic water hose is a material that has been only used as a primary function as an intermediary tool to move water from one place to a different place according to the needs of its activities. Whereas the material has enormous potential from the result of this research process with exploration approach, so the material can be utilized to be used as alternative material and applied to a design work and add value (value) of the material.

Another conclusion from this material exploration study, the material has a 'superior' and 'weak' physical characteristic. By utilizing both characters are used to generate an unexpected response. the superiority of elastic water hose plastic material is supple or flexible. While the weakness of this material is not strong with certain hot temperatures. So the two characters are used as a condition or criteria in the development of experiment. The results that appear in the physical treatment with the criteria of these two characters, produce unique and unexpected forms.

The results of this study are expected to be useful for all of us. It is not enough time to dig up such material potentials only by special treatment with a short time to get something unique and innovative. There are still many unexplored potentials of this object that have been treated only as a habit. Therefore hopefully this research can be continued and applied in the community, either develop the material that has been done research or apply research methods on different material alternatives.

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## Invention of Glass Bottle Waste Musical Instrument

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### ABSTRACT

The performing of music arts of waste bottle sound is a contemporary music performances where all of the instruments is used where a musical alternative is the work cultivators made from waste bottle, especially glass bottles waste. This musical instruments of bottle waste that created by the tiller is a new innovation for yet never been there before. Musical instruments of bottle waste by the tiller is the findings of new research results tenants through the long process. Initially, bottle waste is a thing that is not worth, but with a touch of creativity so it have new functions and turned into works of musical instruments of high value. Process is very important from birth discovery tools music bottle waste is up to the musical performances are not separated from the application of the theory of creativity. The concept of musical performances bottle Sounds This waste is non-thematic, meaning not describe the a particular story. In general, the concept of this musical performances is exploration, the exploration of the waste bottles are made into musical instruments, exploration of musical instruments waste bottle after so, and the exploration potential of the sound of musical instruments waste bottles are then composed into a piece of music are packed in a show.

*Keywords:* invention, innovation, musical instruments, waste, bottle.

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### 1. Introduction

Instrument made from glass bottle waste is a new invention in the development of experimental music, where the musical instruments produced is the result of research and experimental results conducted on the use of glass bottles waste are found in the environment around us.

The design and manufacture of musical waste glass bottles is a cultivation effort in taking a role in environmental conservation by utilizing waste, especially waste glass bottles into something more useful. With its characteristic, waste glass bottles that had been garbage or useless objects, encourage cultivators to be motivated to do a "rescue" effort by converting glass bottle waste into a series of musical instruments. Glass bottle waste has a distinctive character, both in terms of material characteristics different from other materials, as well as from the character of the form that has different shapes and sizes, and has enormous potential when given a touch of creativity. Waste glass bottles can be objects with other functions, namely objects of art that can be enjoyed visually and become a musical instrument that can be enjoyed in audio and visual in the form of a musical art performance.

Bottles are generally only as a function object that is as a container of liquid or liquid, the worker converts into objects with new functions that are more valuable (upcycle), which is an art object in the form of musical instruments that move the region from the object of entry into the arts. Based on the results of interviews and discussions with the lecturer Department of Theater; Department of Television and Film ISBI Bandung who is also a theater writer Arthur S. Nalan, said: "In the work of musical instruments made from glass bottle waste is created there is a new meaning on the bottle media used and developed, previously used only as a function bottle function but through a process of bottle creativity moving from a day to day move into the arts".

Musical instruments made from glass bottle waste can be utilized into a musical performance. Performing music art of glass bottle waste is a musical performing art that utilize a series of musical instruments made from glass bottle waste. Through a creativity-based exploration process, that is exploration of the resulting sounds, glass bottle waste can be transformed into a number of musical instruments that can produce unique and distinctive sounds.

When composed can be a work of musical composition. Prior to being a work of art of music, the creative process is first done, namely the creation of musical instruments through a process of exploration of the sounds based on the material character and the character of the bottle itself. The glass material character in this bottle will produce different sounds according to the shape and dimensions.

## **2. Methodology**

In the design of this glass bottle music instrument, the method of creation used is:

### **1. Planned Method**

In accordance with interviews and discussion results with a lecturer Department of Karawitan ISBI Bandung Heri Herdini, planned method that allows to be applied in the process of creation of the design work of this waste bottle is:

#### **a. Creative Method**

In the design of this bottle waste instrument, one of the methods used is the creative method, where artisans apply the creative method in making musical instruments made from waste bottles. In addition, the farmers also apply creative methods in making musical compositions that utilize musical instruments waste bottles that have been made before.

#### **b. Exploration Method**

Another method used in the design of this bottle waste instrument is the exploration method, where artisans as artists when making musical instruments made from waste bottles are exploring the media bottles themselves, whether the exploration of the character of the material, character shape, and exploration the sounds of the bottled waste. When the musical instruments of bottled waste are finished, the cultivators continue the process of exploring the sounds produced from these musical instruments into a musical instrument to perform.

#### **c. Method of Creation**

In making musical instruments from waste bottles, there is a method of creation, the method used in creating musical instruments in the form of objects.

## **3. Discussion**

The design of musical instruments made from glass bottle waste offers a new concept in the dimensions of the art of performing music. The concept of musical performances is regarded as a show of innovative musical art because it has never existed before, by using ala-non-conventional alternative musical instruments belonging to new types of musical instruments. Almost all of the musical instruments used in this show are the results of a cultivation study designed and made solely by the cultivators, through a process of thought and a very long travel time.

This show is explorative, because all stages are done through the stages of exploration. The initial exploration phase begins by exploring the sounds of bottled waste that eventually create new musical instruments from bottled waste. These new musical instruments offer new nuances either from the way they are played or from the sounds they produce.

The next exploration stage is to explore the musical instruments of bottled waste that have been created. At this stage the exploration is to explore all possible ways to play musical instruments of waste bottles that have been created to produce new types of sounds and unique sounds that cannot be obtained from other musical instruments. After exploring the sounds of the bottled waste musical instruments, then explore the incorporation of several types of musical instrument bottles to become a musical composition that will be performed.

The design of musical instruments made from waste bottles is expected to be an inspiration, change the mindset, and can stimulate sensitivity for the wider community to be more wise in facing waste in the environment. Because basically everyone can work even with waste. If a sensitive society in treating waste, with a touch of waste creativity would be an incredible work of art.

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