ASSALAMU’ALAIKUM WARAHMATULLAH WI BAROKATUH

SALAH SATU PROGRAM YANG CUHK PENTING DALAM AICAD 2017 ADALAH LOMBA POSTER INVENTION. LOMBA INI MENANTANG KEPADA PARA SENIMAN ATAU DESAINER UNTUK MEMPERSEMAHKAN KARYA TEMUAN YANG BERSIFAT INOVATIF, KREATIF, DAN MULTIGUNA, YANG DITAMPILKAN MELALUI MEDIA POSTER.

DARI 18 KARYA YANG MASUK KE MEJA PENJURIAN, YANG BERSAL DARI BERBAGAI PERGURUAN TINGGI SENI/ DESAIN DI NEGARA INDONESIA DAN SIKAN. BA HKAN SEBAGIANNYA LAYAK UNTUK DIPRODUKSI DAN MENGHASILKAN NILAI EKONOMIS YANG CUHK SIGNIFIKAN.

SELAMAT KEPADA SELURUH PESERTA DAN PARA PEMENANG. JANGAN BERHENTI BERINOVASI, BERKREASI, DEMI KEMAJUAN DUNIA SENI DAN DESAIN Khususnya, Dan Demi Kemaslahatan Umat Manusia.

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KETUA TIM JURI INVENTION

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Project Abstract

Ceramics are generally used for potteries, tiles, and decorative elements, there are advanced products that uses ceramics too such as ceramics brakes for performance cars and heat shielding for space shuttles. But ceramics are rarely used for structural parts. This project is a ongoing research about the use of ceramics for joints in interior products. The approach is by combining 3D printed master part that is then casted using gypsum and then clay is than moulded using the gypsum.

Problem Statement

Many interior products uses bamboo or wood for construction, such as chairs, tables. But they all use the same material. Some joint uses metal to strengthen the parts. But these are barely exposed. This is where the idea of using ceramics came up, because ceramics is a material that is beautiful when exposed and finished with a glaze. Besides glazing there are many different way ceramics can be treated, such as marbling. Besides this, clay as the main material of ceramics can be found abundantly and is environmentally friendly and is relatively easy to work on.

Methodology

Research → Visualize → Technical Explore → Execute → Optimize

1. Data Collect
2. Analysis opportunities
1. Brainstorming
2. 2D Concept
1. 3D Digital
2. Mold making
1. 3D Printing
2. Ceramic Form
1. User Experience
2. Evaluation

Novelty

This innovation of using ceramics as joint uses 3D printing to produce the masters. Why 3D printing? Because by using 3D aided design, there are plenty of shapes that is usually hard to make by hand can be designed using Rhinoceros 3D software and then 3D printed as a master for duplication. When applied to a product it will follow the Indonesia Trend Forecasting of 2017-2018. The design style will be a blend of Numericaft and Expose, because the design of the joints are designed with a precise geometric pattern and will be joined fixed to the structure of the product in an exposed manner.

Commercial Potential and Project Target

There is a large untapped potential for this product, as the cost of 3D printing is steadily going down, more local Furniture Small Medium Enterprise’s (SME) can experiment with this type of technic. Also geographically Indonesia has plenty of wood and clay for production, and the human resources needed to produce it. The cost of this technic is also relatively low cost to implement.
ISMAIL ALIF SIREGAR

SINERGIZE

ABSTRACT
CERAMICS ARE GENERALLY USED FOR POTTERIES, TILES, AND DECORATIVE ELEMENTS. THERE ARE ADVANCED PRODUCTS THAT USES CERAMICS TOO SUCH AS CERAMICS BRAKES FOR PERFORM-
ANCE CARS AND HEAT SHIELDING FOR SPACE SHUTTLES. BUT CERAMICS ARE RARELY USED FOR STRUCTURAL PARTS. THIS PROJECT IS A ONGOING RESEARCH ABOUT THE USE OF CERAMICS FOR JOINTS IN INTERIOR PRODUCTS. THE APPROACH IS BY COMBINING 3D PRINTED MASTERS PART THAT IS THEN CASTED USING GYPSUM AND THEN CLAY IS THAN MOULDED. MANY INTERIOR PRODUCTS USES BAMBOO OR WOOD FOR CONSTRUCTION, SUCH AS CHAIRS, TABLES, BUT THEY ALL USE THE SAME MATERIAL. SOME JOINT USES METAL TO STRENGTHEN THE PARTS, BUT THESE ARE BARELY EXPOSED. THIS IS WHERE THE IDEA OF USING CERAMICS CAME UP BECAUSE CERAMICS IS A MATERIAL THAT IS BEAUTIFUL WHEN EXPOSED AND FINISHED WITH A GLAZE. BESIDES GLAZING THERE ARE MANY DIFFERENT WAY CERAMICS CAN BE TREATED SUCH AS MARBLING EFFECT.

THIS INNOVATION OF USING CERAMICS AS JOINT USES 3D PRINTING TO PRODUCE THE MASTERS. BY USING 3D AIDED DESIGN, THERE ARE PLENTY OF SHAPES THAT IS USUALLY HARD TO MAKE BY HAND CAN BE DESIGNED USING RHINOCEROS 3D SOFTWARE AND THEN 3D PRINTED AS A MASTER FOR DUPLICATION. WHEN APPLIED TO A PRODUCT IT WILL FOLLOW THE INDONESIA TREND FORECASTING OF 2017-2018. THE DESIGN STYLE WILL BE A BLEND OF NUMERICRAFT AND EXPOSE, BECAUSE THE DESIGN OF THE JOINTS ARE DESIGNED WITH A PRECISE GEOMETRIC PATTERN AND WILL BE JOINED FIXED TO THE STRUCTURE OF THE PRODUCT IN AN EXPOSED MANNER. BESIDES THIS, CLAY AS THE MAIN MATERIAL OF CERAMICS CAN BE FOUND ABUNDANTLY AND IS ENVIRONMENTALLY FRIENDLY AND IS RELATIVELY EASY TO WORK ON.

THERE IS A LARGE UNTAPPED POTENTIAL FOR THIS PRODUCT, AS THE COST OF 3D PRINTING IS STEADILY GOING DOWN, MORE LOCAL FURNITURE SMALL MEDIUM ENTERPRISE’S (SME) CAN EXPERIMENT WITH THIS TYPE OF TECHNIC. ALSO GEOGRAPHICALLY INDONESIA HAS PLENTY OF WOOD AND CLAY FOR PRODUCTION, AND THE HUMAN RESOURCES NEEDED TO PRODUCE IT THE COST OF THIS TECHNIC IS ALSO RELATIVELY LOW COST TO IMPLEMENT.

KEY WORDS: CERAMICS, FURNITURE, 3D PRINT, STYLING