

## NTCRI and AOI CYCLE intertwine metal and woodworking for craftsmanship bicycle project

commissioned by the national taiwan craft research and development institute (NTCRI), AOI CYCLE' s craftsmanship bicycle project creates an elegant two-wheeler through metal and woodworking. as a common commodity transporting people from A to B for centuries, taiwan is a country well known for manufacturing bikes. their designs can greatly differ and are all equally as complex to construct. the trend for artisanal works has seen a dramatic shift, though, with enthusiasts, collectors and joy riders alike all interested in crafted yet still functional and aesthetic bicycles. together with NTCRI, AOI CYCLE helps redefine the notion of elegant cycling in daily life.



the project combines natural timber, metal work and vegetable tanner leather accessories

all images courtesy of NTCRI

the national taiwan craft research and development institute has introduced cross-disciplinary approaches to craft work in the asian country. they promote craft using natural materials and applying industrial technology as seen, for example, by yung-ling tseng' s metal

art. their neo-taiwanese craftsmanship digital exhibition showcases an array of beautiful, intricate and unique artisanal products from taiwanese creators on the online maison & objet and more platform. the craftsmanship bicycle project by AOI.CYCLE is one such design that explores new possibilities for handmade objects.



the final design defines an elegant, emotionally crafted form

**AOI CYCLE**, led by founder and design director ken hsieh, **began making specialized handmade, crafted bicycles 10 years ago**. ever since, their work has been showcased worldwide from tokyo to london and even the design capital, milan. starting to manufacture e-bikes in 2015, their creations always display a relentless insistence on quality when crafting, even with the influx and considered integration of new technologies. 100 models are hand-built a year, meaning each one is highly unique and sought-after.



screws lined the upside-down U-shaped inlay panel for easier maintenance and longevity

NTCRI and AOI CYCLE' s craftsmanship bicycle project interweaves a refined metallic quality with woodworking. the stainless steel material is carefully protected during each step of construction. its frame is strengthened using an existing aerospace-grade welding technique, which places neatly-positioned and scale-like traces on the form. the imprint symbolizes the focus on safety which the brand prides itself for. vegetable tanned leather adorns the handlebars, saddle and other accessories that need to be tactile for the rider. they add a distinct warmth to the crafted bicycle.



welding the distinct and strong frame of the bike

the craftsmanship bicycle project also coincides with another key exploration of NTCRI, called **application of structural techniques of bamboo and wood craft in bicycle frames**. directed by steven wang with artisans kuo-hua chu, chen-hao hsu and chan-wei hsu, they are exploring how to reshape the traditional method of making mortise and tenon joints as well as the craft of making bamboo furniture and wood structures with natural fibers. the makers share the same belief that the touch of craft should not be superseded by technology. new mediums provide tools to accelerate and reduce work, but the details must be completed by hand so each product is unique.



metal working for the craftsmanship bicycle project

for the bicycle design, chen-hao hsu' s self-run brand chaiwood debuted the seat of their home stool made of wood covered with natural vegetable tanned leather. for their work, chan-wei hsu' s less is casa studio places importance of choosing suitable materials that keep the original texture. finally, huo-hua chu retains technology and touch when creating, as seen in his unique crafted bicycle. together, their final bike design opts for natural wood treatment oil to avoid wood finishing and retain the beauty of the original timber texture. an upside-down U-shaped inlay panel features screws instead of mortise and tenon joints or gluing for easier maintenance and longevity.

*'I' d like to build an enduring handmade bicycle that will last for more than 10 years or even 50 years,'* concludes ken hsieh of AOI CYCLE. **together with NTCRI, their craftsmanship bicycle project achieves this dream in an elegant form.**



portrait of ken hsieh, founder and design director of AOI CYCLE



chen-hao hsu woodworking at his studio



artisan chan-wei hsu bending timber



kuo-hua chu working at his studio

**projects info:**

**brand:** national taiwan craft research and development institute (NTCRI)

**exhibition:** neo-taiwanese craftsmanship / le néo-artisanat taiwanais

**project 1:** craftsmanship bicycle project

**rafter:** AOI CYCLE

**project 2:** application of structural techniques of bamboo and wood craft in bicycle frames

**artisans:** steven wang (supervisor), kuo-hua chu, chen-hao hsu and chan-wei hsu