

# **REPORT ON BICYCLE DESIGN WORKSHOP HELD AT NBKR INSTITUTE OF SCIENCE AND TECHNOLOGY BY SAEISS**

## **INDEX**

About TI cycles

Bicycle: Evaluation, Nomenclature, Classification

Design Process and CFM

Design Validation

BOM and Rule book discussion

## **DAY 1**

### **About TI cycles:**

TI cycles owns the 2<sup>nd</sup> largest cycle market after Hero cycles of 28% of Indian market. TI cycles is the maker of the brands like Hercules, BSA, Track & Trail, Machcity, Montra and Roadeo. TI cycles will be one among the judges for the Bicycle Design Competition.

### **Bicycle: Evaluation, Nomenclature, Classification:**

Based on the design and purpose of the cycle, cycles can be classified as follows:

- Step through cycles
- City cycle
- MTB cycles
- ATB cycles
- Kids cycles
- Special cycles

Example of step through cycles are the lady bird division of the BSA cycles. Which has a lowered frame so that one can easily step through it.

City cycles refers to the cycles which can be driven in an urban city for people having normal life style.

MTB refers to the mountain terrain bicycles designed especially for explorers those who like to travel to forests and mountain region on their bicycles.

ATB refers to the all-terrain bicycles designed for on road and off road experience. They can be used for all sorts of terrains.

Special cycles are those cycles which don't fall under any of these categories. Example the buddy bike, tandem tricycles and unicycles.

All these cycles are evaluated by various tests. A cycle comes into the market by clearing all those tests. The tests are conducted mainly to check a bike's stability, rider comfort, rider safety. All these tests fall under bicycle safety standards ISO 4210/8098 in India.

Some of the important nomenclatures about the parts of bicycles were also explained in this session.

### **Design process and CMF:**

In the second session of day 1 we were given insights on how to start a design process. The first step is to identify the type of market you are targeting. The second step is to collect info from the audience about what kind of product they want. Third step is ideate based on the inputs received from the audience, all the ideas are kept into consideration, out of which the idea which satisfies the most is selected as the final one. After ideation comes the prototyping, where the prototype is built and tested if any changes to be made in the design are done.

CMF stands for Colour, Material and Finish. For a person buying a product he is first attracted by the colours of product later he notices the features it has. Colour psychology and aesthetics are as important as the feature or the problem which the product solves.

### **DAY 2**

On day 2 we were given a brief about the rules of the competition and the reports which we are supposed to submit. Each report will carry certain allotted marks, the team securing the highest score will be declared as the winner

The BOM should be created in such a way that if producing 50000 units of a cycle it should be less than or equal to 5000 rupees for each unit.

And so after the explanation of BOM, valedictory Function was carried out, where we received certification of participation from SAEISS and NBKR Institute of Science and Technology.