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**INTERNATIONAL EFFICIENCY CHALLENGE**

**ELEKTRİKLİ ARAÇ YARIŞLARI**

**pROGRESS Report**

***Deadline: February 28th, 2022***

|  |  |  |
| --- | --- | --- |
| **TEAM NAME:** |  | |
| **TEAM CAPTAIN:** |  | |
| **TEAM CAPTAIN’S UNIVERSITY:** |  | |
| **VEHICLE NAME:** |  | |
| **CATEGORY:** | **ELECTROMOBILE** | **HYDROMOBILE** |
| **VEHICLE STATUS:** | **NEW VEHICLE** | **EXISTING VEHICLE** |

# Team Information

# Work Timeline

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task Name** | **Feb 22** | **Mar 22** | **Apr 22** | **May 22** | **Jun 22** | **Jul 22** | **Aug 22** | **Sep 22** |
|  |  |  |  |  |  |  |  |  |
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# Estimated Cost Calculation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Part | Unit Cost (₺) | Number | Total Cost  (₺) | Explanation |
| Motor |  |  |  |  |
| Motor Driver |  |  |  |  |
| Battery Management System |  |  |  |  |
| Battery Packaging |  |  |  |  |
| Embedded Recharging Unit |  |  |  |  |
| Telemetry |  |  |  |  |
| Electrical Safety |  |  |  |  |
| Energy Management System |  |  |  |  |
| Electronic Differential Application |  |  |  |  |
| Vehicle Control Unit |  |  |  |  |
| Insulation Monitoring Device |  |  |  |  |
| Steering System |  |  |  |  |
| Door Mechanism |  |  |  |  |
| Brake System |  |  |  |  |
| Vehicle Body |  |  |  |  |
| Safety Equipment |  |  |  |  |
| Other |  |  |  |  |
| TOTAL | | |  |  |

# Vehicle Specifications Table

|  |  |  |
| --- | --- | --- |
| Feature | Unit | Value |
| Length | mm |  |
| Width | mm |  |
| Height | mm |  |
| Chassis | material |  |
| Shell | material |  |
| The brake system | hydraulic disc, front, rear, hand brake |  |
| Motor | type |  |
| Motor driver | self-designed, ready-made product |  |
| Motor power | kW |  |
| Motor efficiency | % |  |
| Engine weight | kg |  |
| Battery | type |  |
| Battery pack nominal voltage | V |  |
| Battery pack capacity | Ah |  |
| Battery pack Maximum voltage | V |  |
| Battery pack energy | Wh |  |
| Fuel cell power | kW |  |
| Number of hydrogen cylinders | # |  |
| Hydrogen cylinder pressure | bar |  |
| Super capacitor | yes/no |  |
| You must fill in the fields related to your category. |  |  |

# Domestic Components

|  |  |  |
| --- | --- | --- |
| 1. **Motor** | **Mandatory for Electromobile/Hydromobile** |  |
| 1. **Motor driver** | **Mandatory for Electromobile/Hydromobile** |  |
| 1. **Battery management system (BMS)** | **Mandatory for Electromobile/Hydromobile** |  |
| 1. **Embedded recharging unit** | **Mandatory for Electromobile** |  |
| 1. **Energy management system (EMS)\*** | **Mandatory for Hydromobile** |  |
| 1. **Battery packaging** | **Optional** |  |
| 1. **Electronic differential application** | **Optional** |  |
| 1. **Vehicle control unit (VCU)** | **Optional** |  |
| 1. **Fuel cell\*** | **Optional** |  |
| 1. **Fuel cell control system (circuit)\*** | **Optional** |  |
| 1. **Insulation monitoring device** | **Optional** |  |
| 1. **Steering system** | **Optional** |  |
| 1. **Door mechanism** | **Optional** |  |
| 1. **Braking System** | **Optional** |  |

*\* Hydromobile category only*

# Motor

# Motor Driver

*Table RMP.1: The motor driver specification*

|  |  |  |  |
| --- | --- | --- | --- |
| **Characteristic** |  | **Description/Values** | |
| Manufacturer Part No | : |  | |
| Rated current (A) | : |  | |
| Rated voltage (V) | : |  | |
| Frequency of operation (kHz) | : |  | |
| Current limit (A) | : |  | |
| Driving/Control method | : |  | |
| Weight (kg) | : |  | |
| Dimension (Length x Width x Height) | : |  | |
| Efficiency (%) | : |  | |
| Operating temperature range | : |  | |
| Programmable | : | Yes | No |
| Regenerative braking mode | : | Yes | No |
| Over-voltage protection | : | Yes | No |
| Under-voltage protection | : | Yes | No |
| Over-current protection | : | Yes | No |
| Over-heat protection | : | Yes | No |
| HALL protection | : | Yes | No |
| Phase winding disconnect protection | : | Yes | No |

# Battery Management System (BMS)

# Battery Packaging

# Embedded Recharging Unit

# Energy Management System (EMS) (for Hydromobile category)

# Electronic Differential Application

# Telemetry System

# Vehicle Control Unit (VCU)

# Insulation Monitoring Device

# Steering System

# Door Mechanism

# Braking System

# Hydrogen System (Fuel Cell, Fuel Cell Control System, Hydrogen Line and Metal Hydride Cylinders) (for Hydromobile category)

# Mechanical Details (chassis, roll bars, etc.)