Auxiliary power system with asynchronous alternating current generator

Tecnológico de Monterrey

Escuela de Ingeniería y Ciencias
Departamento de Mecatrónica
Campus Ciudad de México

Manuel Fernando Flores / Martín Jaramillo / Eduardo Ramirez
Advisor: Enrique Muñoz Díaz
Synodals: Ricardo Ganem / Carlos Ruiz / Erick Sillas.
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IEEE

Problem to solve

The acquisition of a CFE connection does not always have the possibility of being installed, due to various reasons such as infrastructure, permits, location, etc. The Biobox company seeks to be able to power its machine autonomously without the need to have a connection to the network.

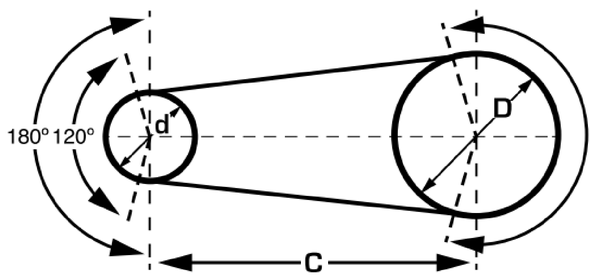
Objective

- Propose, design and build methods to power a machine autonomously, avoiding a connection to the Network.

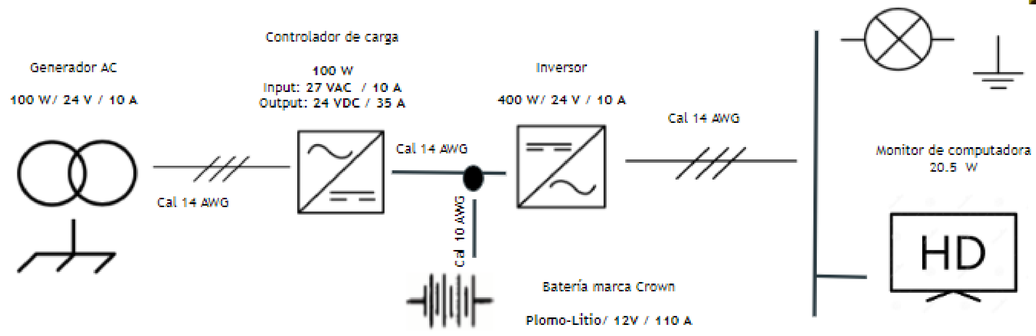
Process

1. Loads analysis
2. Mechanical design.
3. One-line diagram.
4. Selection of electrical components.
5. Prototype.
6. Tests.

	Consumo energético estimado			
	Unidades	Pot (Kwh)	Horas (h)	Energía (KWh)
Pantalla	1	50	19	0.95
Luminarias Laterales	4	16	19	1.216
Luminarias superiores	1	15	19	0.285
Consumo Energético teórico: En (Kwh)				2.451

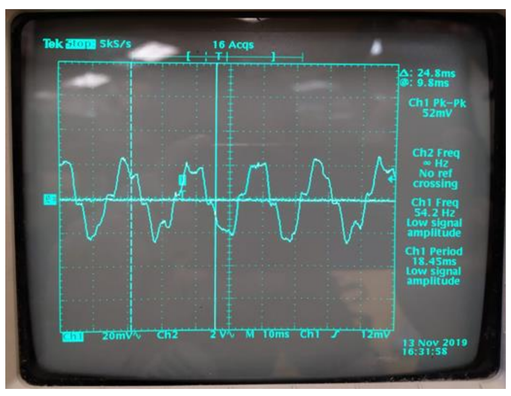


Methodology



Results

The use of equipment such as the oscilloscope shows us an idea of the work cycles at which the average person operates, showing a great change in the frequency at which the generator will deliver its maximum power.



Steps to follow

The Network disconnection option is not always convenient when feeding large loads, due to this The search to find a substitute for the dimensions that fits this project becomes a priority