

Final Year Project Showcase Batch-2018 Year 2022

Department: Automotive & Marine Engineering		
Programme: <u>Automotive & Marine Engineering</u>		
1	Project Idea	To design a wire bending machine that would automate the existing wire bending operation to increase production rate and save cost.
2	Process	Market Survey to gather information on existing wire bending machines <ul style="list-style-type: none"> • Engineering Calculations to select different components and justify our selections • 3D CAD Model to get a clear idea on how the machine is going to work and perform the given operation smoothly.
3	Outcome	Complete 3D design of for the wire bending machine on basis of research , market survey, calculations and simulations which is ready to be manufactured
4	Evidence (Theoretical Basis)	To automate the process of wire bending operation which is currently being done with hands and with some assist of tools and jigs, we will develop the design and fabrication of an automatic wire bending machine which will improve the production rate and quality for the product.
5	Competitive Advantage or Unique Selling Proposition (Cost Reduction, Process improvement, Attainment of any SDG (Sustainable Development Goal), increase of market share or capturing new market or having superior performance over a competitor. In summary, any striking aspect of the project that compels the industry to invest in FYP or purchase it. Some detailed description is required in terms of how, why when what. You can select one or more from the following dropdown and delete the rest of them). Please keep relevant options, delete the rest of them, and correct the sequence	
a	Attainment of any SDG (e.g. How it is achieved and why it is necessary for the region)	SDG#9: Industry, Innovation, and Infrastructure Industrial automation to help the industry by manufacturing a fully automated machine. SDG#12: Responsible Consumption and Production This machine would perform 4 different operations which will save cost and help reduce other expenses like logistics and sourcing which also impacts the environment.
b	Any Environmental Aspect (e.g. carbon reduction, energy-efficient, etc.)	Automation leads to safety in the working environment as compared to manual operation
c	Cost Reduction of Existing Product	Estimated cost of this machine is around 500,000 PKR and in global market, similar operating machine is around 2,100,000 PKR, so by manufacturing this machine we would save around 1,600,000 PKR of the industry
d	Process Improvement which Leads to Superior Product or Cost Reduction, Efficiency Improvement of the Whole Process (e.g. What is the issue is current process and what improvement you suggests)	The process of wire bending operation which is currently being done with hands and with some assist of tools and jigs, we will develop the design of an automatic wire bending machine which will improve the production rate and quality for the product.
e	Expanding of Market share (e.g. how it expand and what is the problem with the current market)	Automatic machine like this are close to none in our local markets, so manufacturing one by ourselves will open new doors in the market place of automated machinery and will definitely expand the market share

f	Capture New Market (e.g. Niche market or unaddressed segment)	It has a potential to capture new market of automated machineries
6	Target Market (Industries, Groups, Individuals, Families, Students, etc) Please provide some detail about the end-user of the product, process, or service	Industries for Industrial automations
7	Team Members (Names along with email address)	Muhammad Abdullah Bin Saleem (rko28june@gmail.com) Abdul Saad Khan (saadk2504@gmail.com) Sameer Arghawani (sameerarghwani200@gmail.com) Nazim Naveed (nzmnaveed@gmail.com)
8	Supervisor Name (along with email address)	Miss Yasmeen Khan (yasmeen@cloud.neduet.edu.pk)
9	Pictures (If any)	