Impact of Physics on Industry

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Abstract:
On this planet nothing is unbounded and unrelated to the fundamental laws of physics. By studying physics one can understand the interconnection between different universal things. After investigating the basics of the physics, we can understand the fundamentals of other branches of science. To make magnificent growth in industrial sector, the knowledge of energy is very important. 40% of the work in manufacturing sector depends directly or indirectly on physics, this is suggested by the Institute of Physics. Millions of jobs and trillions in turnover and GDP are generated by physics in world industrial sectors. The fundamental contribution of modern physics to water, agriculture, environment, health, medical diagnostics, energy-production-store-transmission, electronic goods, space, astrophysics, cosmology, defense, information-communication technology, etc. make an unchallengeable case for how physics has enriched the nation.

Keywords: *Advancement in industry, renewable energy sources, fiber optics, soil management*

1. Introduction

For any country, the better development of any industry sector physics plays an important role. Any advancement in any other fields of science is mainly supported by physics as it is very basic of all science. To gear up the progress in any industrial sector, physics provides basic methods and support systems. In near future, the areas which will affect the economic health of the nation are built under guidance of physicists and advance applications of modern physics. It is easy foe a scientist to know about the business but it is very difficult for a businessman to know about physics. By educating the students on advancements in physics we can improve the economic conditions of the nation.

2. Discussion

Below discussed sectors directly or indirectly connected to physics and industrial strategies.

2.1 Power production sector

Millions of people of the world are engaged in working with industries which produces and distributes the electricity based on physics. Renewable energy sources like water, sun, wind, atomic power have core concept of physics starting with the design of the system to improved capacity to store the resources. By making more and more use of these renewable power sources limits the usage of high-carbon energy sources (i.e. CO_2).

2.2 *Information- communication sector*

The communication sector is also profited by advancement in physics starting with radio signals to fiber optics. The growth of nation's economy in digital sector is fast as the communication systems are upgrading fast. Physics provides the support for this upgradation by contributing in the field of fibers, laser systems, photonic industries, semiconductors with the help of very talented physicists.

2.3 Agriculture industry sector

Various physical techniques can be helpful in agricultural field, while deciding the soil structure, the concentrations of water and other minerals in the soil and their interactions with each other;

determining the consequences of high temperature on crop, substance penetration via bio membranes, etc.

2.4 Food industry sector

The pharma, food and finance sectors are very well controlled by physicists. When we consider what influences food items to taste flavorful, knowing the physical science of oral processing, from smell to first-bite to bolus arrangement, and connecting this sustenance to microstructure, through manufacturing plant production to the crude materials, are focal concerns. Understanding the delicate physics of sustenance microstructure, how it is made and how it is experienced by shoppers are topics for physicists to contribute to add to the nourishment producing area.

2.5 Life science sector

Physics innovations are basic to propel in life science. Physics assumed a basic part of the revelation of DNA. From around 50-60 years, physics has kept on supporting research around there through advancements, for example, spectrographs, software for spectroscopic low-light imaging, high resolution cameras and optical tweezers- a laser framework that is empowered to move organic frameworks on the micrometer scale.

2.6 Environment sector

Superconducting innovation could address these real difficulties, for example, feasible sustainable power source, energy store, control transmission, and clean water, low-discharge transportation, adapting to environmental change and natural events, and recovering utilization of land. Terahertz imaging innovation has incredible potential in non-damaging testing, industrial process observing and control to enhance the industry procedure effectiveness and unwavering quality by decreasing waste materials and lethal side-effects.

2.7 Transport sector

Physical science looks into gives lithium-ion (Li-ion) batteries for electrical vehicles, lightweight, and solid propelled materials, productive motors for new vehicles. GPS was conceivable in light of the nuclear clock. GPS innovation has numerous utilizations from being in guides in vehicles. Maglev trains and H.T.S. engines for electric shipping can possibly decrease the discharges that add to the greenhouse gasses. Nanomaterials are presently used to coat airplane to decrease friction which thusly lessens the fuel utilization.

2.8 Construction sector

Designing physical science is instrumental in growing new materials and innovations and expanding the maintainability and proficiency of new structures through energy administration and inherently sustainable power source generation.

2.9 Health sector

Physical science enhances our personal satisfaction by giving the essential understanding important to growing new instrumentation and strategies for medical applications, for example, nuclear magnetic resonance imaging , positron emission tomography, radioisotope, laser surgery, X- rays, ultrasonic imaging and so on.

2.10 Oil and gas sector

Physical science advances are fundamental to the extraction and preparing of oil and gas. Oil organization produces fuel and greases for the engine industries and industrial apparatus, basic to this is their mastery in understanding the properties of greases and their working conditions inside hardware, which empowers them to enhance fuel effectiveness and increment cost proficiency.

3. Conclusion

For the world economy to develop and be rebalanced for innovative, learning escalated industries there must be increasingly engaged help for physical science-based business. Without material science and its connected fields, we could not be able to have our items meet the proficiency and cost focus on that is basic for our business to accomplish productivity. The maintained and stable subsidizing for material science research and a prepared supply of physical science prepared specialists will enable physical science and the economy to drive. We, in this manner, ask all legislatures to look for exhortation from physicists and different researchers on issues of science strategy.

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