

**INTELLECTUAL PROPERTY AND MECHANICAL ENGINEERING- A
STUDY EMPHASIZING THE IMPORTANCE OF KNOWLEDGE OF
INTELLECTUAL PROPERTY RIGHTS AMONGST MECHANICAL
ENGINEERS**

Prof. Dr. Mukund Sarda¹, Prof. Dr. Bhagyashree Deshpande²,
Dr. Sapna Deo³, Ms. Anwasha Pathak⁴

¹Dean, Principal, New Law College, Bharati Vidyapeeth Deemed University, Pune

²Vice Principal, New Law College, Bharati Vidyapeeth Deemed University, Pune

³Assistant Professor, New Law College, Bharati Vidyapeeth Deemed University, Pune

⁴LLM- 1 Semester, New Law College, Bharati Vidyapeeth Deemed University, Pune

ABSTRACT

Mechanical Engineering is a sundry subject that obtains its source from the need of manufacturing. The main role of mechanical engineers is to take a product from an idea to the marketplace. It is the core of human novelty and creativeness. In order to protect their creativity and invention, the mechanical engineers also need to have complete knowledge of Intellectual Property Rights. According to the World Intellectual Property Organization (WIPO), intellectual property refers to "creations of the mind: inventions, literary, and artistic works, and symbols, names, images, and designs used in commerce. IP is divided into two categories: industrial property, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs."

Engineering and Intellectual Property Rights require secure association with each other. This serves as one of the main essential aspects of Globalization. The problem of unavailability of sufficient knowledge in the current stream is still unsolved. This paper talks about how Intellectual Property and Mechanical Engineering are related to one another and why is the knowledge of Intellectual Property important for Engineers and how the engineers can benefit from the knowledge of IP with regards to better career opportunities and better source of income.

Keywords: Intellectual Property, knowledge management, patents, IT Security, innovation, infringement.

INTRODUCTION

Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. The term Intellectual Property is related to human brain applied for creativity and invention. Various efforts in terms of inputs of manpower, time and energy, skill, money, etc are required to invent or create something newⁱ. Intellectual property rights are like any other property right. They allow creators, or owners, of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation.ⁱⁱ Intellectual Property Rights was recognized in the Paris Convention for Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic works under by World Intellectual Property Organization (WIPO) for the first time. The authors in this Article focus upon how the engineers can benefit from the knowledge of IP with regards to better career opportunities and better source of income which shall help in increasing the economic growth of the country.

IMPORTANCE OF INTELLECTUAL PROPERTY

The subject and knowledge of Intellectual Property is very important for engineers because a lot of technical innovations occur in engineering institutes and to protect them knowledge of IP is necessary. Knowledge of IP helps an engineer to not only protect his valuable ideas and thus create 'intellectual property' but also to promote its licensing and development in the larger interests of societyⁱⁱⁱ.

Intellectual Property is divided into two categories, namely industrial property and copyright. Categories like patents, utility model and designs are covered under Intellectual property rights which serve as a tool established for inventions, form and appearance of objects. The rigid policy of IPR concerning scrutinization with reference to matters related to patent application in order to prevent the evergreening patents has attained special connotation. Study of Intellectual Property Rights and Mechanical Engineering go hand in hand. The link between both the spheres is initiated to give much importance to pottage the rooming of invention in various other fields of engineering.

It is seen that the developed countries have a relatively stronger IPR system and aim in encouraging invention and creative activities which help in economic growth. India as a developing country needs to focus on the importance of Intellectual Property and its benefits for engineers. 'The Make in India' initiative was launched in September 2014 which focused on

country's manufacturing sector. Intellectual Property Rights was privileged by this policy of the government which helped them to initiate patent based activities.

It is therefore a challenge to understand how IP needs to go hand in hand with mechanical engineering. India as a developing nation has focused on the development of the engineering sector and there have been governmental organs like the Engineering Export Promotional Council (EEPC)^{iv} as the authority in charge for promoting engineering goods, products and various other services from India. Engineering sector being a diverse sector encourages various foreign markets in terms of manufacturing costs and innovation. This is why they need to imbibe in the knowledge of Intellectual Property in order to protect their invention from exploitation. Use of IP rights would prevent any third party to use any product or information freely. IP plays a major role in ornamenting competitiveness of enterprises based on expertise and know how. For most of this kind, a successful invention means a new commercially viable product. Pragmatic evidences specify that SMEs are prone in using trade secrets instead of patents in order to protect the inventions. The main reason behind this might be the high cost involved in the patenting process. A study showed that 42% of company's used patents while another 78% used trade secrets to protect their ideas^v. For any idea laudable of being an appropriate patentable invention, the choice between trade secret and patent shall be of a strategic decision in business but it should be taken only on a later stage of development. Ideally the choice for the engineers should depend mostly on nature of invention and where the product is going to be used. If the capital of the business is low, they should make sure that initially even if they are protected as trade secret; later on they shall get patented.

IMPORTANCE OF TRADEMARKS AND COPYRIGHT REGISTRATION

It is important to note that clients who are mainly focused on goods made through mechanical technology, need to even get assisted about their protection beginning from the logo or name that they are going to use for it. When we register a Trademark, it is very important to list all the probable goods to which the trade mark shall be useful. There are instances where we see how a company often wins a trademark for one particular type of good but fails mention other linked items to which the trademark might also be valid. In such cases we see the rise of faltering infringers. When it's a SME, they should make sure that of there is an agent filing on their behalf, he shall file it in the name of the SME and not under his name.

Whilst copyright may not seem immediately applicable in the mechanical and electrical engineering sectors, it is an important tool for protecting your marketing material, manuals, packaging, and ultimate market share. Be it electrical or computer or mechanical, engineering often even involves codes^{vi}. These codes also need to be evaluated as they are often infringed by copyright. Copyright Amendment Act 2012 helps to protect Digital rights management which

helps in protection of source codes^{vii}. Company should initiate a reverse engineer a product's source code and build new code accomplishing the same goals. Copyright infringements in this sector consist of copied product images featured on the infringer's website to advertise their products.

IMPORTANCE OF PATENTABILITY

Securing a Patent to protect the machinery used in the small and large scale industry is of utmost importance. The engineering sector revolves around machinery, pumps, engines and other such devices. In India, there is an increase in the manufacturing of these products but there is not seen any kind of effort being put to protect it.^{viii} The worst that could happen would be that the local partners could begin to produce similar technology using the IPR of SMEs this will bring the local partner in an eminent position and he could anytime break the contract with the SME and continue producing similar goods even though the contract would have been expired^{ix}. There are various designs or machinery which shall serve as analogues to patents and protection of semiconductor topographies will act as a key part of cutting infringement off at the source.

Core mechanical engineering deals with application of scientific principles for production of any design or tool. The system of operation and transportation using mechanical engineering and thermal energy that call for basic understanding of the concept like structural analysis, thermodynamics, is more and more interdisciplinary^x. It has become essential develop new technology and new concepts emerging from this field of education and in order to strive your country towards being developed, the more important is to protect them under your name. A mechanical engineering innovation can come from either a high school student or even from an illiterate villager, what is important that we do not let anybody exploit our invention and misuse it.

KNOWLEDGE OF TRADE SECRETS^{xi} AND IPR PROTECTION

Trade Secrets may seem as poor form of IPR Protection but sometimes are the best form of protection available. Sometimes many companies have their potential in the production method rather than the product. In such cases protecting trade secrets shall be the best method of protection from infringement. Medium and large scale industries shall be proactive in knowing that the best way to protect trade secrets is by gaining access to them. Trade secrets may look weak in protection but it is only because they lose their value once they are divulged. Thus one needs to be aware of guarding them. Signing of Non Disclosure Agreements can help in keeping the secrets safe.

OBJECTIVES OF THE STUDY

The main objective of this study is to find out the relevance of Intellectual Property in mechanical engineering and why is it important for engineers to have knowledge about it.

CONCLUSION

In the world of growing technology, everyone aims at using better technologies and manufacturing better products. How far the field of engineering is concerned, they are the ones who are supposedly the frontiers of any kind of manufacturing or using of technology is concerned. For better protection of their invention and creativity, it is very important for them to have the knowledge of all the ways in which their products can be protected and that they are not infringed of their right. This is mostly possible by patenting the machinery or design that they are using in manufacturing of the product.

IP related decisions should not be ignored be it in any sector. How far the government is concerned, they are trying to make collaborative efforts with private sector to facilitate the useful inventions by way allocating funds for the engineering sector.

REFERENCES

- ⁱ Lalit Jajpura, Bhupinder Singh and Rajkishore Nayak, An Importance To Intellectual Property Rights And Their Importance In Indian Context, Journal of Intellectual Property Rights Vol 22, January 2017 pp 32-41 also available at file:///C:/Users/work/Desktop/41C26FED-7AFE-40EA-8736-4E6C516917AE.pdf
- ⁱⁱ World Intellectual Property Organization, WIPO Publication No 450, ISBN 978-92-805-1555-0, also available at http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf
- ⁱⁱⁱ <http://www.youripinsider.eu/south-east-asia-ipr-basics-ipr-mechanical-electrical-engineering-industries-Philippines/>
- ^{iv} <https://www.eepcindia.org/>
- ^v Dr P.R.L Rajavenkatesan, Dr E Prema, Value Of Intellectual Property Rights In Engineering Sectors International Journal of Civil Engineering and Technology (IJCIET) Volume 9, Issue 7, July 2018, pp. 1910–1912, Article ID: IJCIET_09_07_202 Available online at <http://www.iaeme.com/ijciyet/issues.asp?JType=IJCIET&VType=9&IType=7> ISSN Print: 0976-6308 and ISSN Online: 0976-6316
- ^{vi} <http://www.youripinsider.eu/south-east-asia-ipr-basics-ipr-mechanical-electrical-engineering-industries-Philippines/>

- vii Cathal Lane, Intellectual Property- Why it matters to engineers, Engineers Journal, also available at <http://www.engineersjournal.ie/2014/05/08/intellectual-property-why-it-matters-to-engineers/>
- viii PS Malwadkar, Milind Pande, Study of Patents filed in India in Mechanical Engineering Sector, Journal of Intellectual Property Rights, Vol 20, September 2015, pp 305-319, also available at <http://nopr.niscair.res.in/bitstream/123456789/33194/1/JIPR%2020%285%29%20305-319.pdf>
- ix The World of Mechanical Engineering Patents, Tech Patent, also available at <https://www.upcounsel.com/mechanical-engineering-patent>
- x The World of Mechanical Engineering Patents, Tech Patent, also available at <http://technology-patent.com/techpatent/?p=71>
- xi http://www.wipo.int/sme/en/ip_business/trade_secrets/trade_secrets.htm