

<p>FORM 2</p> <p>THE PATENTS ACT 1970</p> <p>39 OF 1970</p> <p>&</p> <p>THE PATENT RULES 2003</p> <p>COMPLETE SPECIFICATION</p> <p>(SEE SECTIONS 10 & RULE 13)</p>		
<p>1. TITLE OF THE INVENTION</p> <p style="text-align: center;">Production and Operation management System using IoT</p>		
<p>2. APPLICANTS (S)</p>		
NAME	NATIONALITY	ADDRESS
Dr. Vivek Sharma	Indian	14, KIRTI NAGAR P.O.-IZAT NAGAR BAREILLY-243 122 (U.P.) INDIA
Dr. Ritesh Kumar Saxena	Indian	6- B, RAMAYAN ENCLAVE NEAR SURESH SHARMA NAGAR, BAREILLY. U.P.- INDIA Pin- 243006
Dr. Kamal Kishor Pandey	Indian	134, Faculty Residence, IFTM University, Lodhipur Rajput, Moradabad-244102
Dr. Harminder Kaur	Indian	64-D, Suncity vistaar, Bareilly, U.P. 243122
Mrs. Anjali Saxena	Indian	6- B, RAMAYAN ENCLAVE NEAR SURESH SHARMA NAGAR, BAREILLY U.P.- INDIA PIN- 243006
Dr. Megha Bhatia	Indian	Megha Bhatia C/o Mr. Abhishek Bhatia H.no.12 Milan Vihar, opposite vidhan kesari press Delhi Road, Moradabad-244001, U.P.

2. PREAMBLE TO THE DESCRIPTION

COMPLETE SPECIFICATION

The following specification particularly describes the invention and the manner in which
it is to be performed

Production and Operation management System using IoT

Abstract:

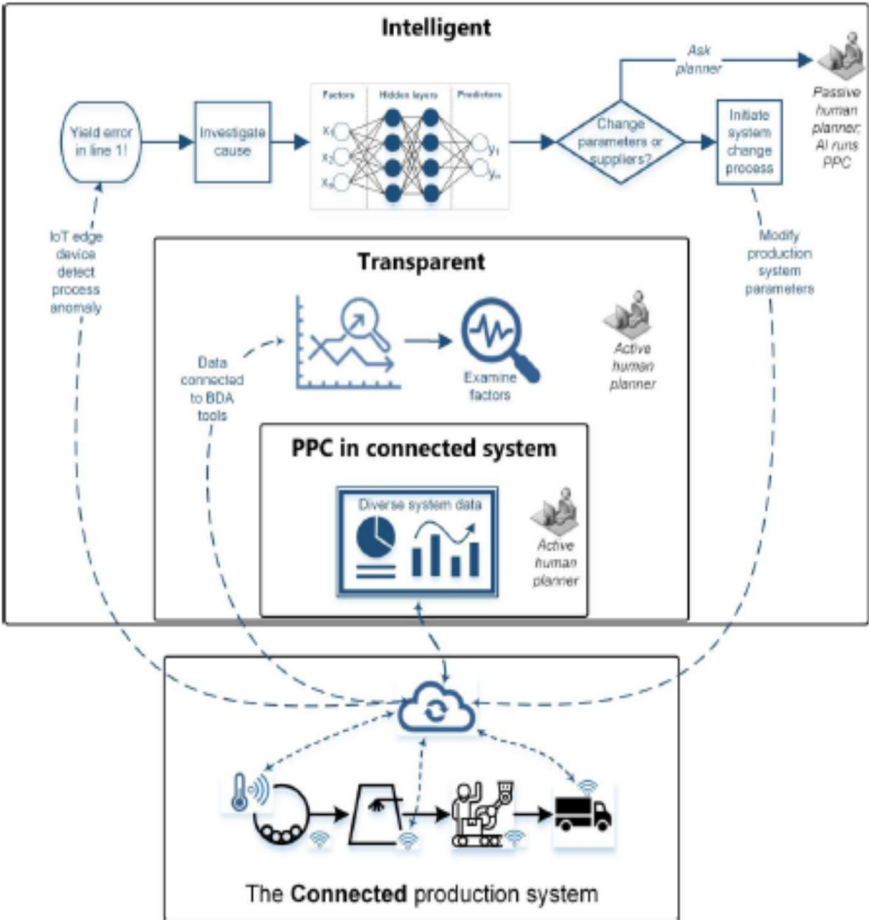
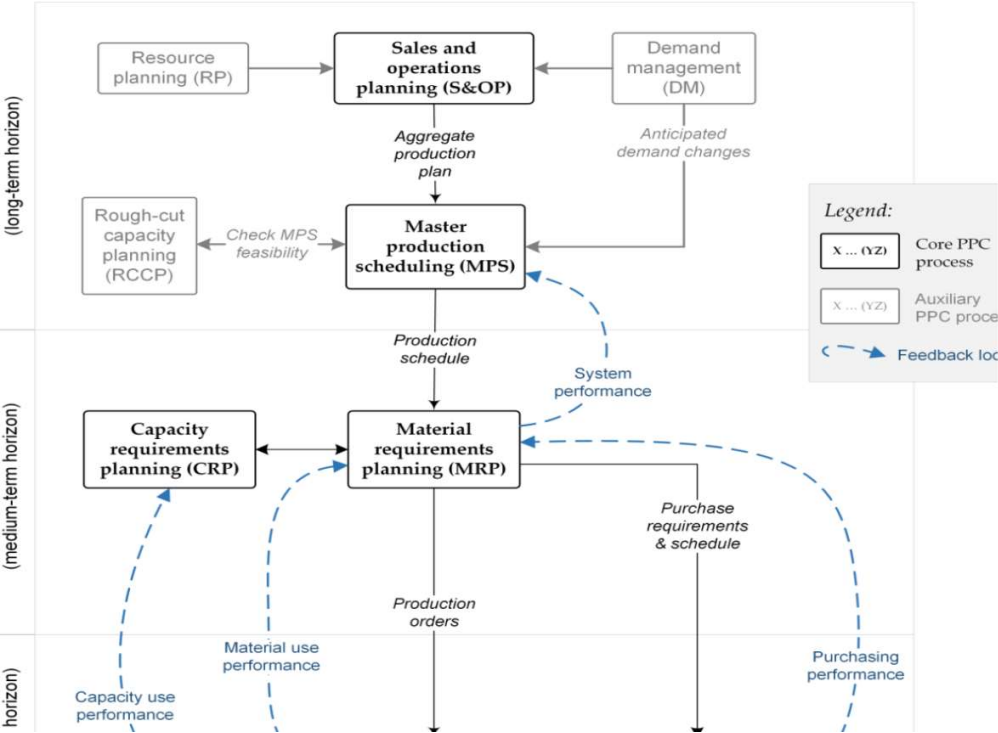
Numerous businesses are battling to maintain control of their manufacturing systems in an uncertain market. The adoption of "smart" technologies such as the internet of things and cloud computing into production management has taken significantly longer than anticipated. Examining these issues through the lens of four case companies demonstrates their importance. Then we develop a sophisticated PPC system. Additionally, we discuss the advantages of reusing old items. The model presented here takes a small step-by-step approach to improving PPC processes for Industry 4.0 and sustainability. Product manufacturers benefit more from intelligent product strategies, whereas stock manufacturers benefit more from intelligent process and pay-per-click (PPC) strategies.

Descriptions:

Current research on Industry 4.0 and its technologies, as well as the extent to which it can be used, has a significant empirical content problem. This paper investigated the processes and operations of four case companies from various industries to help bridge the gap between MTO and MTS factories. We also observed how they operated their MTO and MTS machines. How would you define smart PPC? What are its drawbacks, and what are its advantages? These are must be addressed in order to find a low-risk way to begin implementing these technologies. This incremental, conceptual model for developing smart PPC systems in manufacturing businesses has been demonstrated to be effective using use-case and case studies that demonstrate how it works. This study's findings help us understand more in three important ways. Because of the Internet of Things and a smart PPC approach that uses data analytics, business intelligence, and other methods are more likely to be able to make smart decisions. This is what we discovered during our research: Implementations of Industry 4.0 should be compatible. To figure out how to use industry 4.0 tools in a way that works for them, each company should use its own smart production planning and control. The approach should be guided by the variables in the planning environment (such as supply and demand processes) (PPC). The industry in which a company operates can also influence how much they require and use a smart PPC tool. People in these industries will be unable to use smart technology because it is incompatible with their work. Concerning the third and final point, we stated that a smart PPC system that can be implemented quickly can compensate for the lack of specific sustainability KPIs that guide PPC processes. Finally, there is a minor snag with this point. A mature smart PPC solution may also reduce the need for human planners, with a single planner overseeing an operation that was previously overseen by a team of several planners. When a small number of people participate in a study, it is impossible to make broad statements about how well the study's findings can be applied to other people. Although all four of our case companies are located in Norway, their sizes, reach, market positions, and industry structures allow us to compare and contrast their findings. We can learn from one another this way. Our findings may have been influenced by the fact that these companies are based in Norway, rather than

in countries with more diverse and extensive industrial economies, such as Germany or even Sweden. Smart operations are already being used in important industries for the country, such as Norway's oil and gas service industry and Germany's automobile manufacturing industry. We anticipate that this trend will continue. For example, our findings may understate the extent to which people are conversing about the subject in general. We can't predict how these technologies will change in the future because we've only been looking at these companies for a short time (or the vision of Industry 4.0). We did not look at how industry 4.0 might be linked to popular improvement ideas like lean in this study, despite the fact that these ideas are frequently discussed. This demonstrates their dedication to lean. While the supply chain and industry structure were examined to a lesser extent in this investigation, the company's point of view dominated the investigation. It may be interesting to see how the supply chain works in this study because it provides us with a better understanding of what we're studying. Following Eisenhardt's rules, we believe the study's methodology is good enough to meet the study's stated goals during research in a new field. Future research could build on this study to determine whether and how far the study's findings can be generalised. Following the first survey, large-scale national or international surveys can investigate the issues raised. Products that are complex MTO manufacturers, on the other hand, were discovered to prefer a smart process strategy over those who produced simple products. To be successful, production planners and system developers will need to be able to do smart PPC, and research into the skills and methods for putting this knowledge into practise is critical for the business world.

DRAWINGS:



CLAIMS

1. Production and Operation management System using IoT describe Numerous businesses to maintain control of their manufacturing systems.
2. Production and Operation management System using IoT of claim 1, wherein said that system developers will need to be able to do smart PPC.
3. Production and Operation management System using IoT of claim 1, wherein said the proposed system is more accurate and faster.
4. Production and Operation management System using IoT of claim 1, wherein said that in this paper, we analyzed and discussed various aspects.
5. Production and Operation management System using IoT of claim 1, wherein said that in recent years, IoT become a hot topic in medical system.
6. Production and Operation management System using IoT of claim 1, wherein said that a reliable and efficient system for monitoring variables.
7. Production and Operation management System using IoT of claim 1, wherein said that this research looks at all of the important and recent work that has been done so far, as well as its limitations and challenges.

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The following specification particularly describes the invention and the manner in which it is to be performed

Production and Operation management System using IIoT

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Abstract:

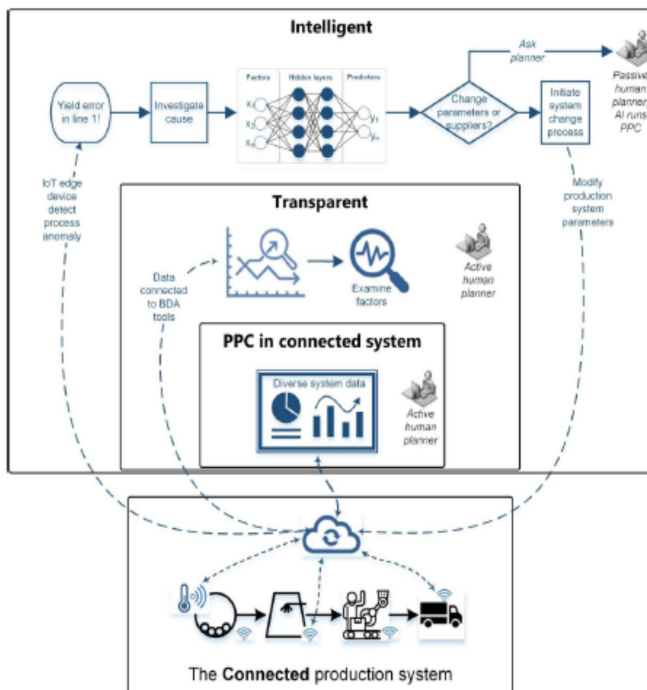
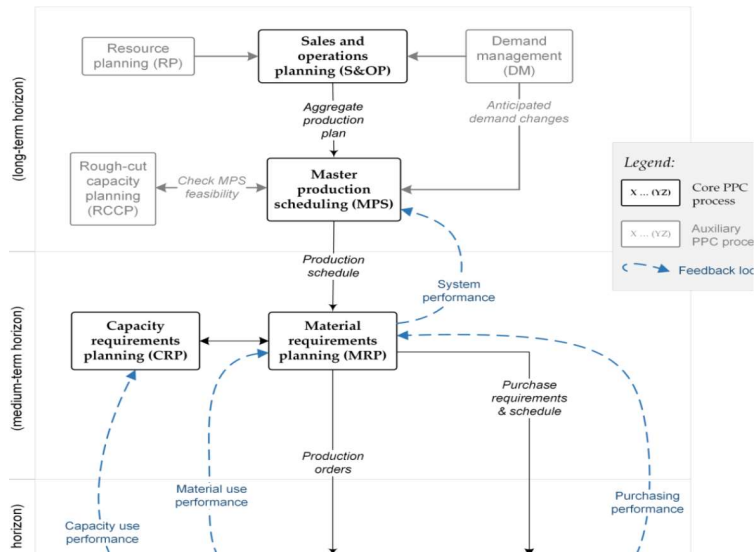
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