

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_125075
Title of the Manuscript:	Comparative Analysis of Direct and Soft Starting Method for Induction Motor on Difference Load Levels
Type of the Article	

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript is valuable for the scientific community as it provides a comprehensive analysis of two critical induction motor startup techniques, Direct Online (DOL) and Soft Starters, using real-world simulations. The focus on the soft starter's ability to reduce inrush currents and minimize mechanical wear is particularly relevant for industries seeking to enhance motor efficiency and extend equipment lifespan. I appreciate the use of MATLAB/Simulink for performance evaluation across various load conditions, which adds rigor and depth to the analysis. The findings highlight the importance of soft starters in reducing transients, making the study beneficial for industries aiming for more efficient and reliable motor operation.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title of the article could be refined to better reflect the core focus of the study. A suitable title should clearly convey both the comparative analysis and the techniques being evaluated, as well as highlight the use of simulation for performance assessment. A suggestion could be:</p> <p>"Comparative Analysis of Direct Online and Soft Starter Techniques for Three-Phase Induction Motors Using MATLAB/Simulink"</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The abstract is generally comprehensive, providing an overview of the key elements such as the comparison between Direct Online (DOL) and Soft Starter techniques, the use of MATLAB/Simulink for simulation, and the performance of a 35-kW induction motor under different load conditions.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The structure seems suitable, but the manuscript can benefit from clear subsections that maintain logical flow and use visual aids like tables or graphs to support the comparative analysis.</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript appears scientifically robust and technically sound due to its clear focus on a well-defined engineering problem: the comparison of Direct Online (DOL) and Soft Starter techniques for three-phase induction motors. The use of MATLAB/Simulink to simulate and analyze different load conditions ensures accurate and repeatable performance evaluation, which is crucial for validating the findings. The attention to key parameters such as transient time and inrush current, especially the soft starter's ability to mitigate mechanical wear, demonstrates a thorough understanding of motor startup behavior. Additionally, by testing a range of load conditions, the study provides a comprehensive analysis that makes the results applicable to various industrial scenarios.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :</p>	<p>It is better to add some of the references to this manuscript for better literature survey</p> <ol style="list-style-type: none"> 1. Rao, G. M., Karthik, M. V., Kumar, A. A., Kumar, C. S., Parameshwar, T., & Bindu, A. H. (2024). ANFIS-based optimisation for achieving the maximum torque per ampere in induction motor drive with conventional PI. <i>International Journal of Applied</i>, 13(2), 320-327. 2. Rao, G. M., & Srikanth, G. (2018). Comparative study of maximum torque control by pi ann of induction motor. <i>International Journal of Applied Engineering Research</i>, 13(7), 4620-4625. 3. Srikanth, G. R. G. (2019). Electrical Drive System Modeling for Real-Time Digital Simulation Applications. <i>International Journal of Recent Technology and Engineering (IJRTE.)</i> ISSN:, 8(2), 2277-3878. 	

Review Form 3

Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?	Yes, English is ok	
Optional/General comments	<p>Clarity and Structure: The manuscript is generally well-structured, but certain sections could benefit from more clarity. Specifically, the results and discussion sections should focus more on interpreting the results and their broader implications for industrial applications. Consider reorganizing the content to make the flow from methodology to findings more seamless.</p> <p><input type="checkbox"/> Abstract Refinement: The abstract could be made more concise and should clearly state the research objective. Reducing the detail on each test condition and summarizing the key findings will make it more impactful for the reader.</p>	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	G Madhusudhana Rao
Department, University & Country	CMR Institute of Technology, India