



CERTIFICATE

Seven Publicações Ltda hereby declares that the article **Optimization in heat exchangers using artificial intelligence: A hybrid neural network approach for predicting deposit accumulation and equipment efficiency**, by Adroaldo Santos Soares, Ana Laise do Nascimento dos Santos, Oberdan Rocha Pinheiro, Marcelo Albano Moret Simões Gonçalves and Fernando Luiz Pellegrini Pessoa, was PUBLISHED in an individual chapter of the book, theme: Harmony of Knowledge: Exploring Interdisciplinary Synergie, under registration number ISBN: 978-65-84976- 83-2.

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Finally, I sign this declaration.

São José dos Pinhais, Brazil, December 12, 2023.




Nathan Albano Valente
WRITING EDITOR