

Correction

Correction: Karaköse, M.; Yücel, Ö. Predictive Modeling of the Hydrate Formation Temperature in Highly Pressurized Natural Gas Pipelines. *Energies* 2024, 17, 5306

Mustafa Karaköse and Özgün Yücel * 

Department of Chemical Engineering, Gebze Technical University, Kocaeli 41400, Turkey

* Correspondence: yozgun@gtu.edu.tr

Error in Affiliation

In the published publication [1], there was an error regarding the affiliation “Department of Chemical Engineering, Gebze Technical University, 41420 Gebze, Turkey”. The updated affiliation should be: “Department of Chemical Engineering, Gebze Technical University, Kocaeli 41400, Turkey”.

Text Correction

There was an error in the original publication. The mistake was incorrectly stating the random forest model as the best performer instead of the decision tree model.

A correction has been made to the fifth paragraph of Section 4 (Results):

Both decision tree and random forest models show good performance, but decision tree has a slight edge due to reduced overfitting and better generalization. Random forest’s predictions are more tightly clustered around the $y = x$ line. GAM performs better than the LM by capturing non-linear relationships, but it still is not satisfactory compared to random forest and decision tree. The decision tree model shows the best performance, with predictions closely aligning with the observed values, indicating high accuracy and reliability in predicting hydrate formation temperature in highly pressurized natural gas pipelines. These comparisons highlight the weaknesses and strengths of each model in terms of their predictive accuracy and the ability to solve complex and non-linear relationships in the data.

Error in Table

In the original publication [1], there was a mistake in Table 2 as published. In the values currently listed as -42.5 to 34.0 , it appears there was an error in unit conversion, and these values were incorrectly entered in Celsius instead of Kelvin.

The test/train ratio was originally written as ‘70%/30’ and ‘80/20’, but corrected it to ‘70%/30%’ and ‘80%/20%’. The corrected Table 2 appears below.



Received: 16 December 2024

Accepted: 24 December 2024

Published: 25 March 2025

Citation: Karaköse, M.; Yücel, Ö. Correction: Karaköse, M.; Yücel, Ö. Predictive Modeling of the Hydrate Formation Temperature in Highly Pressurized Natural Gas Pipelines. *Energies* 2024, 17, 5306. *Energies* **2025**, *18*, 1634. <https://doi.org/10.3390/en18071634>

Copyright: © 2025 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Table 2. Comparison of studies in the literature for the estimation of the HFT and this study.

Data Size	Method	Validation Method (Train/Test)	Specific Gravity	Pressure (MPa)	Temperature (K)	Ref. No
203	ANN	136/67	0.55–1	1.37–18.47	274.1–297.4	[22]
120	GA-PSA			0.28–100	275–330	[23]
377	ANN	283/94	0.55–1.52	0.042–548	178.3–324.1	[24]
2387	ANN		0.55–2.01	0.04–0.39	148–320	[25]
987	ANN	80%/20%		3–10	264–284	[26]
279	GEP	223/56	0.56–0.83	0.58–62.85	273.7–303.1	[27]
343	GMDH	241/102		0.58–62.85	273.2–304.8	[28]
203,820	ML	70%/30%	0.555–0.716	1.01–500.0	230.6–307.2	This Study

The authors state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

Reference

1. Karaköse, M.; Yücel, Ö. Predictive Modeling of the Hydrate Formation Temperature in Highly Pressurized Natural Gas Pipelines. *Energies* **2024**, *17*, 5306. [[CrossRef](#)]

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.