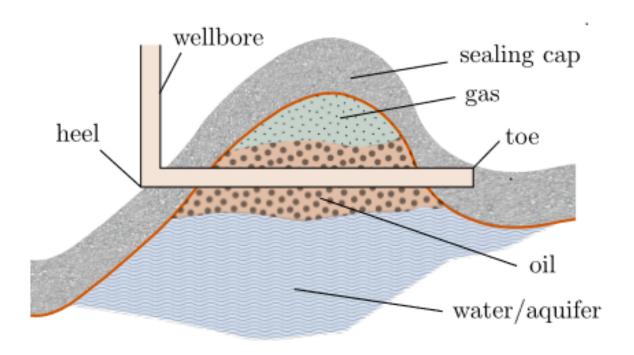


Project FM1015 Modelling of Dynamic Systems 2022

Oil production model project



G12 FM1015 2022

Faculty of Technology, Natural Sciences and Maritime Sciences

Campus Porsgrunn

Preface

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa. Porsgrunn, 12th October 2022

Anne Camilla Frantzen Jøndal Daniel Kristoffer Breiland Teigen Krister Pedersen Lars Rikard Rådstoga

Contents

Preface		2	
Cc	Contents	;	3
1	Problems 1.1 Expression of density of liquid mixture	. 4	4 4
Re	References		5

1 Problems

This chapter includes discussions and answers of problems presented in the 2022 FM1015 project description.

1.1 Expression of density of liquid mixture

Expression of density of liquid mixture. Formula

References

- [1] Chai chat with ai, https://chai.ml/, (Accessed on 09/14/2022).
- [2] R. Murphy, R. Murphy and R. Arkin, *Introduction to AI Robotics* (A Bradford book). MIT Press, 2000, p. 4, ISBN: 9780262133838. [Online]. Available: https://books.google.ne/books?id=RVlnL%5C_X6FrwC.
- [3] J. Sifakis, Autonomous systems an architectural characterization, Nov. 2018.
- [4] J. Černetič, S. Strmčnik and D. Brandt, 'Revisiting the social impact of automation,' IFAC Proceedings Volumes, vol. 35, no. 1, pp. 167–178, 2002, 15th IFAC World Congress, ISSN: 1474-6670. DOI: https://doi.org/10.3182/20020721-6-ES-1901.01648. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S1474667015400692.
- [5] Laveste arbeidsledighet på 14 år e24, https://e24.no/norsk-oekonomi/i/KzxVJ6/laveste-arbeidsledighet-paa-14-aar, (Accessed on 09/15/2022).
- [6] The unemployment rate fell to 3.5%, matching its lowest level in the last 50 years: Npr, https://www.npr.org/2022/08/05/1116036160/the-unemployment-rate-fell-to-3-5-matching-its-lowest-level-in-the-last-50-years, (Accessed on 09/15/2022).
- [7] To av tre jordbærdyrkere på nes i ringsaker gir seg nrk innlandet lokale nyheter, tv og radio, https://www.nrk.no/innlandet/to-av-tre-jordbaerdyrkere-pa-nes-i-ringsaker-gir-seg-1.15607791, (Accessed on 09/15/2022).
- [8] J. Bryson and A. Winfield, 'Standardizing ethical design for artificial intelligence and autonomous systems,' *Computer*, vol. 50, no. 5, pp. 116–119, 2017. DOI: 10. 1109/MC.2017.154.
- [9] P. Gruhn, 'Human machine interface (hmi) design: The good, the bad, and the ugly (and what makes them so),' 2011.
- [10] Nozzle wikipedia, https://en.wikipedia.org/wiki/Nozzle, (Accessed on 09/19/2022).
- [11] M. Endsley and E. Kiris, 'The out-of-the-loop performance problem and level of control in automation,' *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 37, Jun. 1995. DOI: 10.1518/001872095779064555.