Hongkyoung Shin

Current Program: Masters
Department of Naval Architecture and Ocean Engineering
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EDUCATION

M. Sc., Naval Architecture and Ocean Engineering, Seoul National University (SNU), S. Korea, 2024.03-Present
   Advisor : Youngsub Lim

B. Sc., Marine system Engineering, Korea Maritime& Ocean University (KMOU), S. Korea, 2021.02

CAREER

- Ship engineer, H-line shipping CO., 2019.01-2019.07
   Apprentice engineer (ship name: HL SUR(LNG carrier)), H-line shipping CO.,2019.01.21-2019.07.06
- Ship engineer, Korea Maritime & Ocean University (KMOU)., 2019.07-2020.01
   Apprentice engineer (ship name: HANNARA(Training Ship)), Korea Maritime & Ocean University,2019.07.15-2020.01.27
- Ship engineer, H-line shipping CO., 2021.03-2023.07
   3rd engineer (ship name: HL SUR(LNG carrier)), H-line shipping CO.,2021.03.13-2021.07.14
   3rd engineer (ship name: HL MUSCAT(LNG carrier)), H-line shipping CO.,2021.09.01-2022.05.17
      Main duty & equipment: Refrigeration system(compressor, condenser, evaporator, Exp. valve)
      Fresh water generator, Aux machinery, electricity(220V)
   2nd engineer (B) (ship name: HL SUR(LNG carrier)), H-line shipping CO.,2022.08.03-2022.12.10
      Main duty & equipment: Diesel generator(3450 kW), Main turbine, chemical & L.O,
   2nd engineer (A) (ship name: HL PYEONGTAEK(LNG carrier)), H-line shipping CO.,2023.02.01-2023.05.24
      Main duty & equipment: Main boiler (60 bar, 515 ℃), Bunkering(LSMGO), Turbine generator (3450 kW),
      Propulsion system, electricity(440V)
*Performed LNG Loading & Unloading more than 20 times during the boarding period at Oman, Gladstone,2021~2023

QUALIFICATION, LICENSURES

- Marine engineer License (Korea Institute of maritime and fisheries technology)
- Certificate of proficiency in advanced training for service on ships subject to the IGF code
- The Secondary School Teacher (Grade II) of ship engineering

AWARDS

- Best Oral Presentation Award, The Korean Institute of Chemical Engineers, 2024

TEACHING EXPERIENCE

Teaching Assistant, SNU
   · Environment-Friendly Ship and Offshore Process Systems Design, Spring 2024

· Environment-Friendly Ship Process Systems Design, Regional Talent Development Program, Winter 2024

PROJECT AND RESEARCH EXPERIENCE

Project	Duration	Partner
SHI carbon capture experiment	2024.09-	Samsung Heavy Industries Co., Ltd. (SHI)
Technology Development of Onboard Carbon Capture and Storage System and Pilot Test	2024-	KRISO
K-EU Development of an Energy-Efficient Onboard Carbon Capture Systems	2024.04-2028.12	KRSIO
Feasibility evaluation and development of methanol and ammonia synthesis process	2024.04-2024.10	Samsung Heavy Industries Co., Ltd. (SHI)
Modelling of boil-off gas in LCO2 carrier	2023.09.01-2023.11.31	Hanwha OCEAN Co., Ltd.

RESEARCH INTERESTS

Process Design, Modeling, Simulation, Dynamics and Optimization

Cost evaluation, Life Cycle Assessment

- CO_2 capture, compression, transportation and liquefaction process for Onboard CCS (Carbon Capture and Storage)
- Ship Cargo Handling System
- Alternative fuels for greenhouse gas reduction (methanol, ammonia)

SELECTED PRESENTATIONS

- Oral: **Hongkyoung Shin**, Juyoung Oh, Donghoi Kim, Simon Roussanaly, Youngsub Lim, "Greenhouse gas Emssion Reduction Assessment of Onboard Carbon Capture Systems from a Well-to-Wake Perspective" 2024 KOSMEE, Jeju, S. Korea, November 14-16, 2024
- Oral: **Hongkyoung Shin**, Juyoung Oh, Abduljelil Worku Sabir, Pyeongsoo Lee, Youngsub Lim, "Techno-economic analysis of onboard membrane CO_2 capture and liquefaction systems" 2024 KIChE Fall Meeting, Busan, S. Korea, October 16-18, 2024
- Oral: **Hongkyoung Shin**, Juyoung Oh, Youngsub Lim, "Techno-economic analysis of onboard CO_2 capture systems under variable sea water temperature" 해양플랜트설계연구회, Seoul, S. Korea, June 27-28, 2024

TRAINING

- AspenTech Training Course: Design and Rate Shell and Tube Heat exchangers, 2024
- AspenTech Webinar: Essentials of Aspen HYSYS and Carbon Capturing Techniques for Sustainability Modeling, 2024
- AspenTech Training Course: Aspen HYSYS Dynamics: Introduction to Dynamic Modeling, 2024

COMPUTER SKILLS

- Program: Aspen Plus, Aspen HYSYS, Schlumberger Symmetry,

    : GREET (Life cycle assessment)

    : Matlab, python,

    : MicroSoft (Excel, Word, PowerPoint etc)

REFERENCES

ASOPEL (Advanced Ship and Offshore Process Engineering Lab)
Professor Lim, Youngsub
- Professor
- Naval Architect and Ocean Eng., Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul, 08826, Republic of Korea
- Tel: +82-2-880-7325
- E-mail: s98thesb@snu.ac.kr