

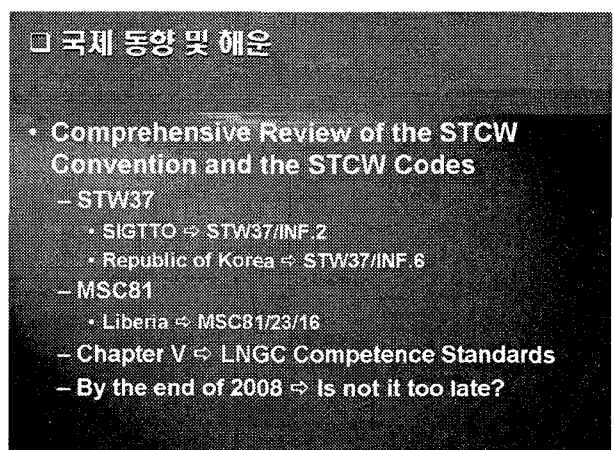
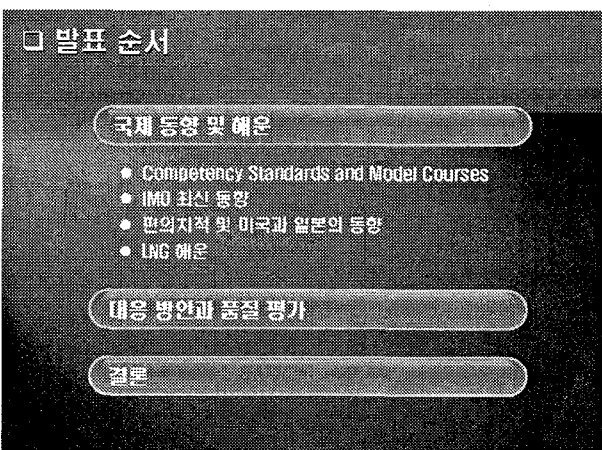
LNG 인력양성의 국제동향과 대응방안

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요 약 : LNG 선박의 급증에 의한 승무원 심각한 부족현상에 대비하여, IMO에서는 STCW의 전면 개정 등의 대응방안을 마련하고 있다. 이러한 국제기구의 대응은 물론 향후 최대 수입국이 될 것으로 예상되는 미국에서는 미국연안에 들어오는 전 LNG 선박의 미국적 선화를 목표로 하는 법안을 승인하는 등 LNG 선박의 안전과 보안으로 인하여 세계 LNG 해운에 있어서의 커다란 변화가 예상된다. 한국해양대학교에서는 이러한 변화의 물결에 발 빠르게 대처하고자 아시아 LNG 교육훈련센터의 설립과 함께 IMO 및 미국의 해양대학들과의 회의를 통하여 대응방안을 검토한 바 있다. 이 발표에서는 LNG 인력양성을 위한 국제적인 동향을 살펴본 후, 이러한 국제적 변화의 물결에 대비하기 위한 방안에 대하여 설명하고자 한다.

핵심용어 : IMO STCW 개정, 편의치적, Coast Guard and Maritime Transportation Act of 2006, 품질평가, Competency Standard



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□ 국제 동향 및 해운

- **Flags of Convenience (FOC)**
 - Purpose of FOC ⇨ Maximum Profit
 - Globalization of Shipping
 - Lack of Quality Control Mechanism
 - Sub-standard Vessels
- **Signs to National Fleet and Crew**
 - Tonnage Taxation System
 - Republic of Korea ⇨ Inevitable National Fleet
 - USA
 - Coast Guard and Maritime Transportation Act of 2006
 - Japan
 - FOC vessels ⇨ can fly Japanese Flag

□ 대응 방안과 품질 평가

- **Unified Competency Standards**
 - Revision of the STCW Convention
 - Effectuation? ⇨ 2010 or later
- **The 2nd IAMU Round Table on LNG**
 - 31st May, 2006, Washington DC, USA
 - Separate Efforts to Develop
 - Competency Standards for Qualified LNG Officers
 - Train the Trainer Course
 - Meeting for Action Plan
 - Government Officers, Professionals, Professors, etc.

□ 국제 동향 및 해운

- **How about LNG sector?**
 - **Oligopoly by "The Club" Members**
 - European Oil Majors: Shell, BP
 - European Owners: Golar, Hoegh
 - Japanese 2 (MOL, NYK) from 1983
 - Korean Owners from 1993
 - **Sharing Process: Very Slow**
 - Rapid Expansion from 2000 led by USA Oil Majors
 - New Entrants to LNG Business and Shipping
 - Favored ship managers have been allowed to have an access.
 - Dorchester, V. Ships, Anglo-Eastern, Thome, etc.

□ 대응 방안과 품질 평가

- **Separate Development of Competency Standards**
 - 166 Member States in IMO
 - LNG Exporting and Importing Countries ⇨ Less than 20
 - Member States directly related to LNG should urge IMO to develop appropriate Standards for LNGC Officers separately and urgently.
- **Interim Agreement**
 - Still Time Gap 1~2 Years before the Effectuation
 - Between Governments, Organizations, N/ET Facilities, etc.
 - **Regulations Considered**
 - STCW I/6 (Training and Assessment)
 - STCW Code A-I/6 (Training and Assessment)
 - STCW Code B-I/6 (Guidance Regarding Training and Assessment)

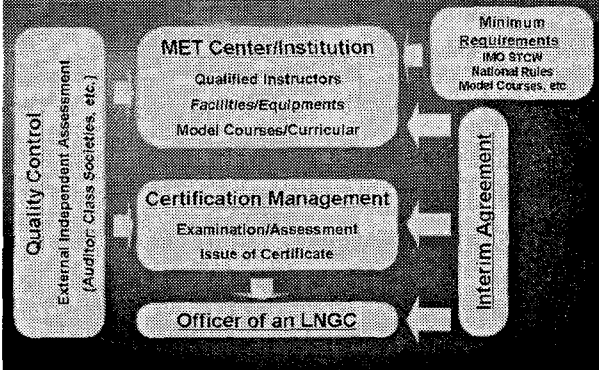
□ 국제 동향 및 해운

- **The Infrastructure of Safety in LNG Sector**
 - **Conclusion: Money was spent sufficiently**
 - European Oil Majors: Out of Charming Profit
 - **Japan: Generous Governmental & Clients' Support**
 - LNG dependency is a National Energy Policy decision
 - National Ship Construction Finance Scheme for LNG
 - 100% amortization in 12 years (the rest of the contract period of 15 years with no capital cost burden)
 - Full cost coverage of the operating cost, including that of crewing costs of Japanese sealers.
 - Special Education and Training Cost subsidy
 - The financial resources for expensive Simulators, and monopolistic LNG officer training capacity.
 - Korea: Similar to Japan
 - **THE POINT**
 - Citizen eventually paid in the form of utility bills.

□ 대응 방안과 품질 평가

- **The 3rd Party Assessment and Quality Control**
 - **Legal Aspects**
 - Minimum Requirement ⇨ STCW, National Rules, etc.
 - Competency Standards and Related Model Courses
 - **Facilities and Equipments**
 - Quality and Quantity
 - Maintenance and Operation
 - **Human Resources**
 - Qualified Instructors
 - **Certification**
 - Examination and Assessment, etc.

□ 다음 방안과 품질 평가



□ 결론

- International Tripartite Collaboration
 - Governments
 - Academia (IAMU)
 - Industries
- Unified Competency Standards
 - Separate Development of LNGC Standards
 - Interim Agreements between Parties
- Human Resource
 - Standards for Instructors
 - Onboard and on-the-job Training
- The 3rd Party Assessment and Quality Control
 - MET Institutions and Centers