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## Integration of Human Factors into Classification / Certification

James Card

*American Bureau of Shipping*

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*2<sup>nd</sup> International Workshop on Human Factors in Offshore Operations.*

Demystifying Human Factors - Practical Solutions to Reduce  
Incidents and Improve Safety, Quality, and Reliability



**James Card**

**Senior Vice President, American Bureau of  
Shipping**

**Integration of Human Factors into  
Classification / Certification**

# 1996 Conference

- Nearly six years since the first workshop in 1996
- PTP was getting underway
- Four pillars of Maritime Safety:
  - Management
  - Work Environment
  - Behavior
  - Technology Application

# *ABS, Classification Societies*

- ABS founded in 1862
- Mission has been to promoting the security of life, property, and the natural environment



# *Human Error and Accidents*

- 80% of marine casualties and accidents (IMO, USCG)
- 90% of ship collisions (NTSB)
- 85% of ship accidents (Navy Safety Center)
- 66% of marine oil spills (UK)
- 62% of hazardous materials spills (OTA)
- 75% of merchant ship accidents (Republic of Germany)

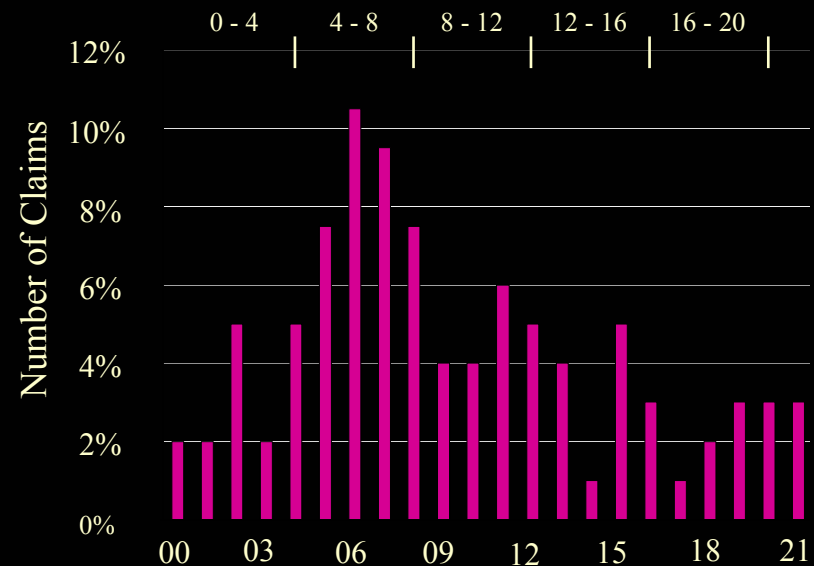
# *Human Factors Issues in Classification / Certification*

ABS has organized its approach around into four human factors areas



# ABS - Management and Organizational Issues

- Reviewing Accident and Near Miss Data Bases
- Develop a scheme for root cause analysis which includes human factors related causes



# *ABS - Management and Organizational Issues*

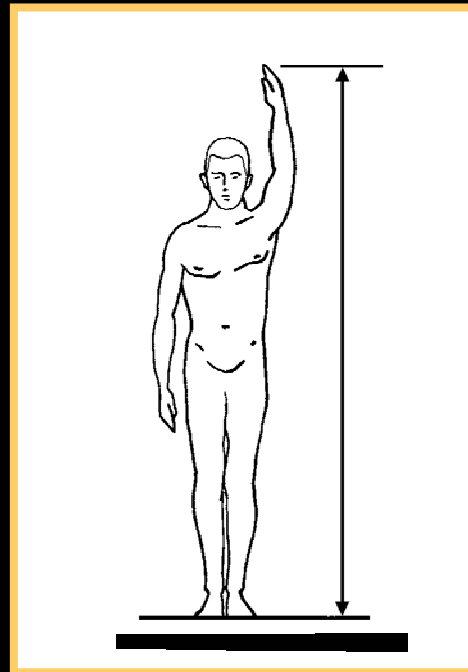
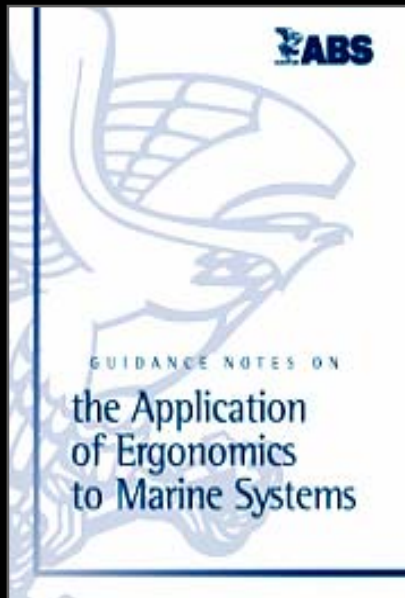
- Installation-to-Marine Vessels, Installation-to-Helicopters, Installation-to-Beach and Internal Installation Communications Guide





# ABS – *Installation Design and Layout*

## Guidance Notes on the Application of Ergonomics to Marine Systems



# ABS – *Installation Design and Layout*

## ABS Guide to Crew Habitability on Offshore Installations



# ABS – *Installation Design and Layout*

## ABS Guidance Notes for Human-Computer Interfaces



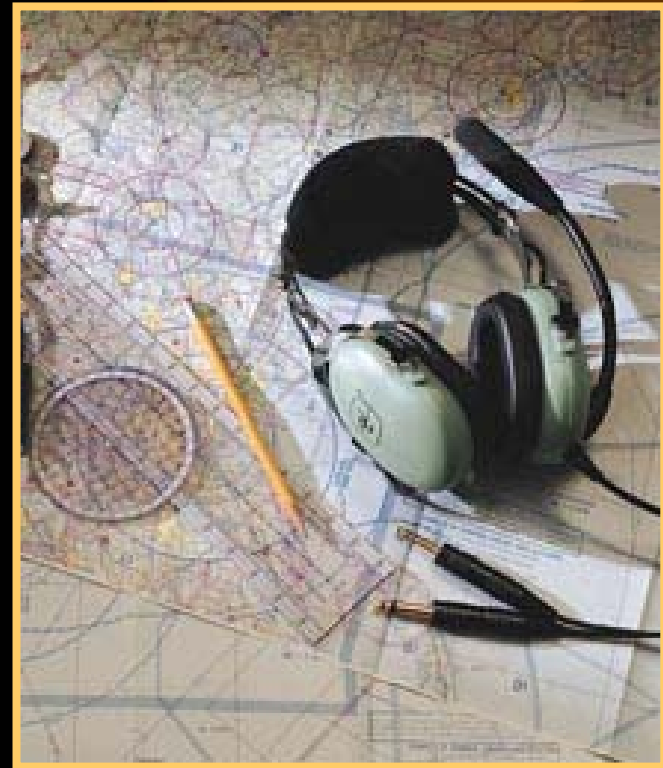
# ABS – *Ambient Environment*

## ABS Guide for Crew Habitability on Offshore Installations



# ABS – *People Issues*

- Development of Personnel Verification Tools
  - Qualifications
  - Personnel Selection
  - Training
  - Crew Endurance
  - Risk Tolerance



# ABS – *People Issues*

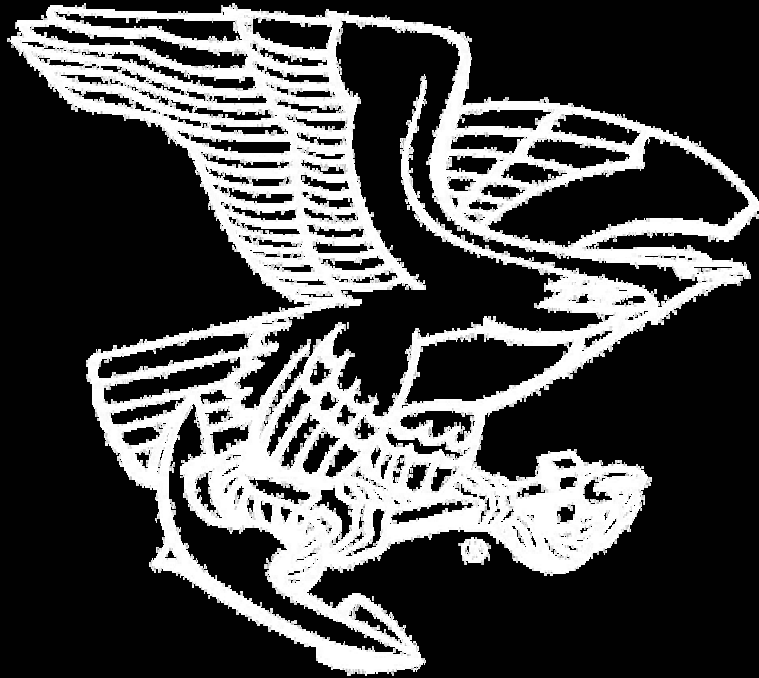
- Workload and Situation Awareness Assessment



# *Different Models – Same Message*



# Questions?



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