Integration of Human Factors into Classification / Certification

James Card
American Bureau of Shipping

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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)
ABS has organized its approach around into four human factors areas:

- **People**
- **Ambient Environment**
- **Installation Design & Layout**
- **Management & Organizational Issues**
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