

# Marine Technical Society Dynamic Positioning Conference

Houston, Texas  
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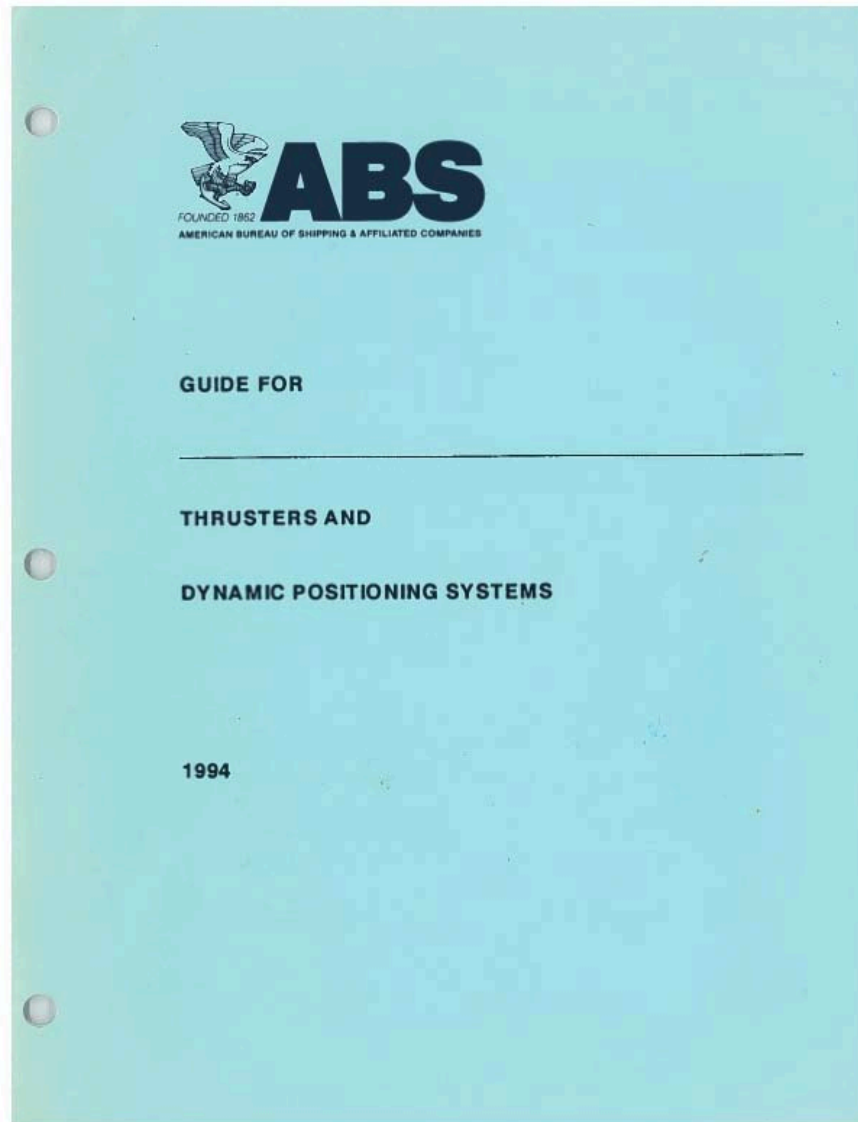
## DPS Notations: Clarifying the Role of Classification Frequently Asked Questions

**George Reilly**

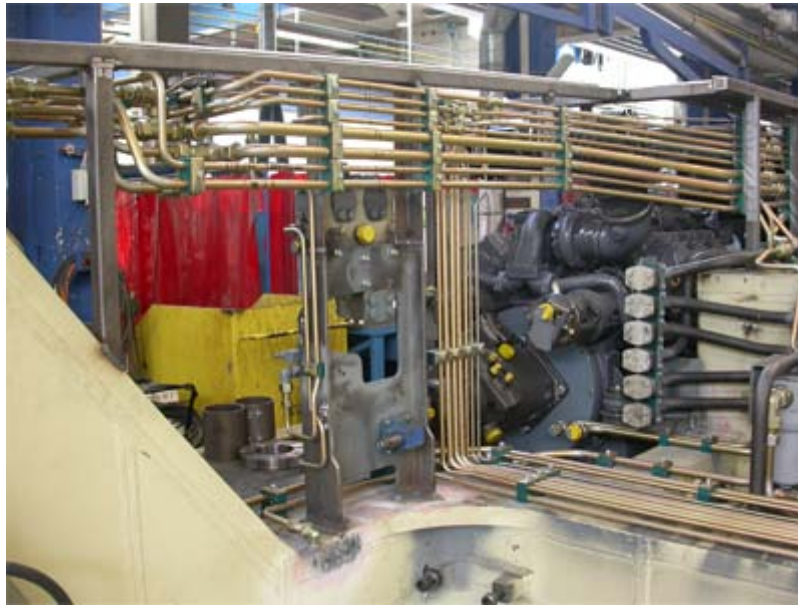
Managing Principal Engineer, Marine Technology  
**ABS**



# 1994 Guide



# IMO Consequence Classes/FMEA



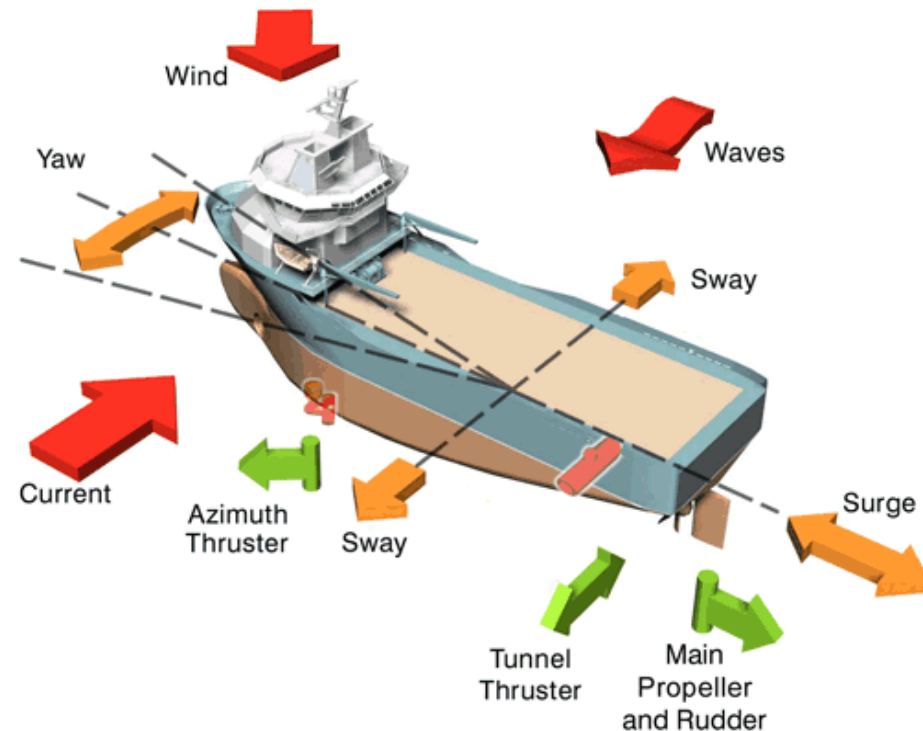
# Class Prescriptive Rules

- DPS notation dependent on
  - Redundancy targets
  - Single point of failure
  - FMEA generation
  - Plan review
  - Sea trials



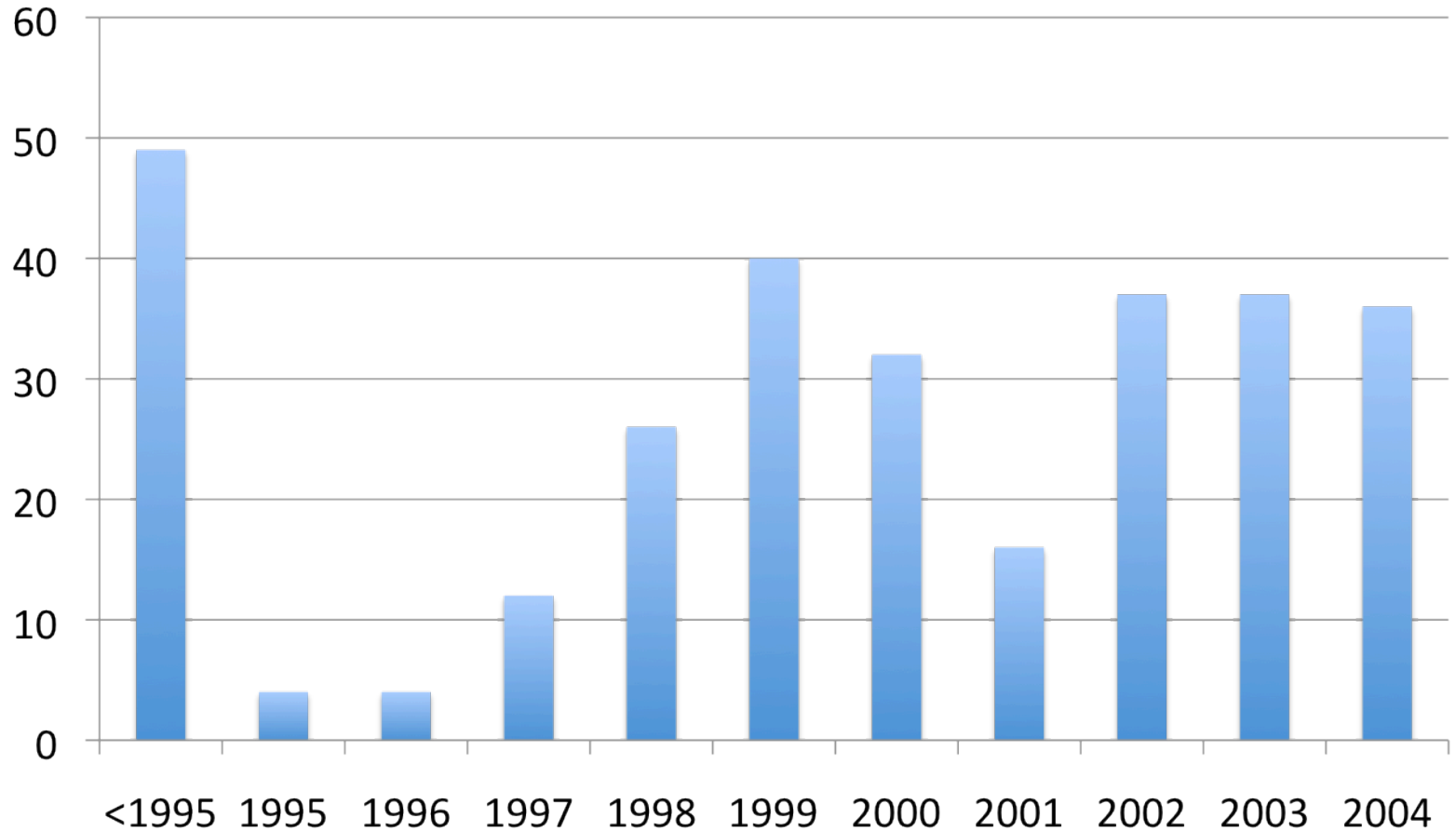
# DPS Not Just an “Add On”

- Needs to be considered throughout design
  - Cable routes
  - Ventilation
  - Fire extinguishing
  - Power supplies
    - High power
    - Control power
      - Switchgear
      - Sensors

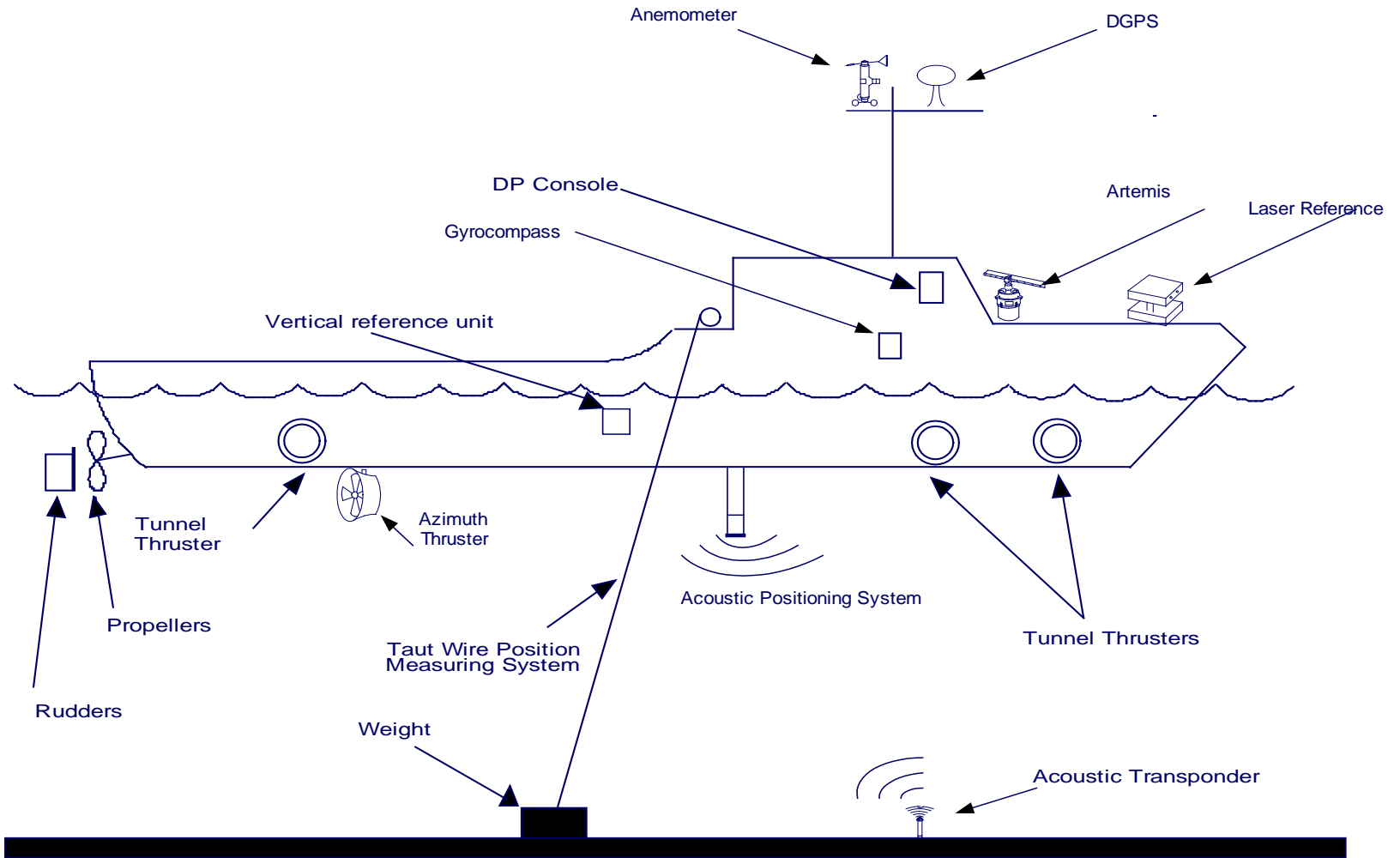


# DPS Vessels Entering ABS Class

## ABS Class (1994 to 2004)



# Elements of a Typical DP System





# Possible Developments

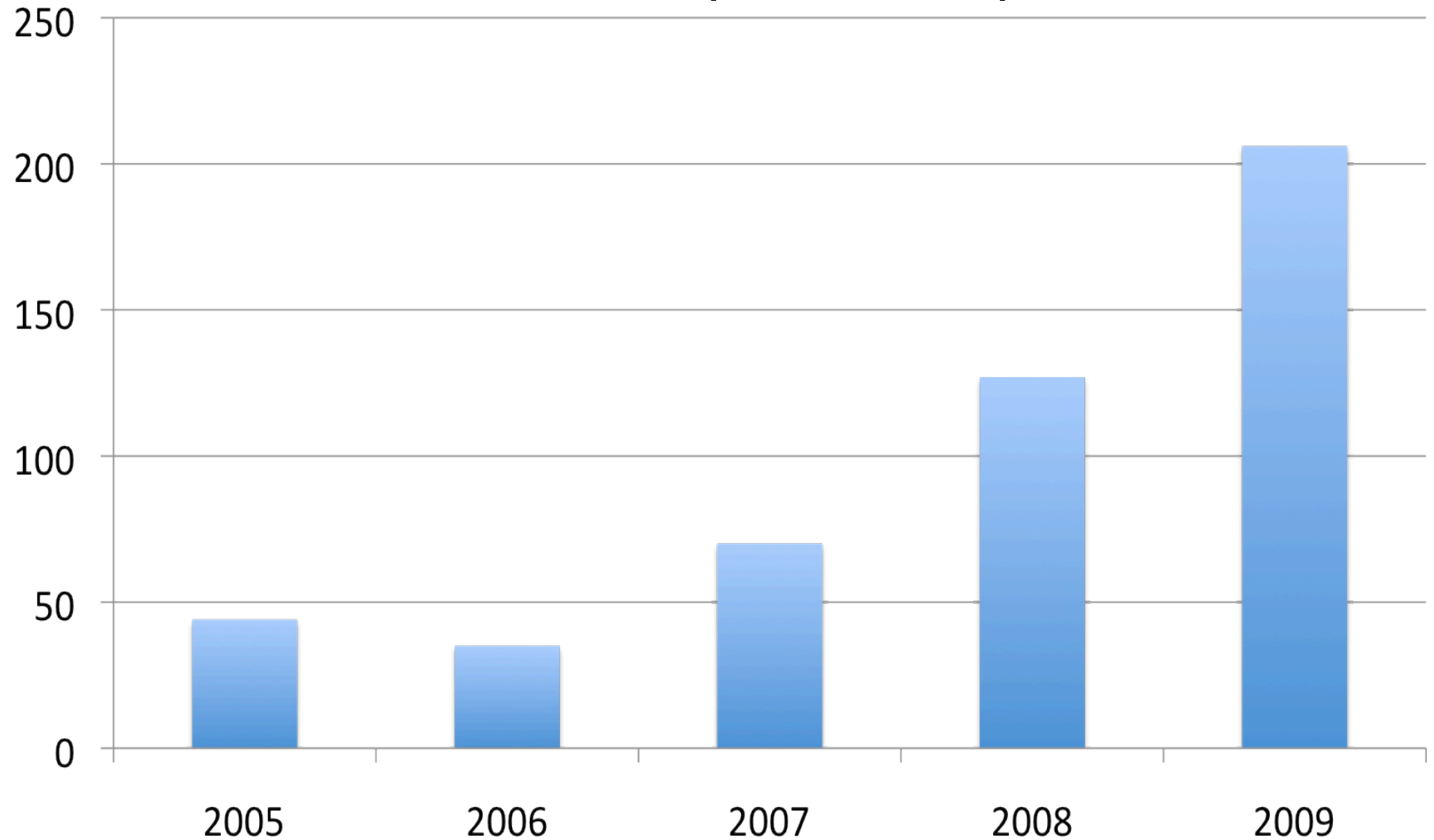
- Environmental criteria
- Reliability (other than through redundancy)
- Different (vessel) applications
- More detailed guidance
- More survey guidance



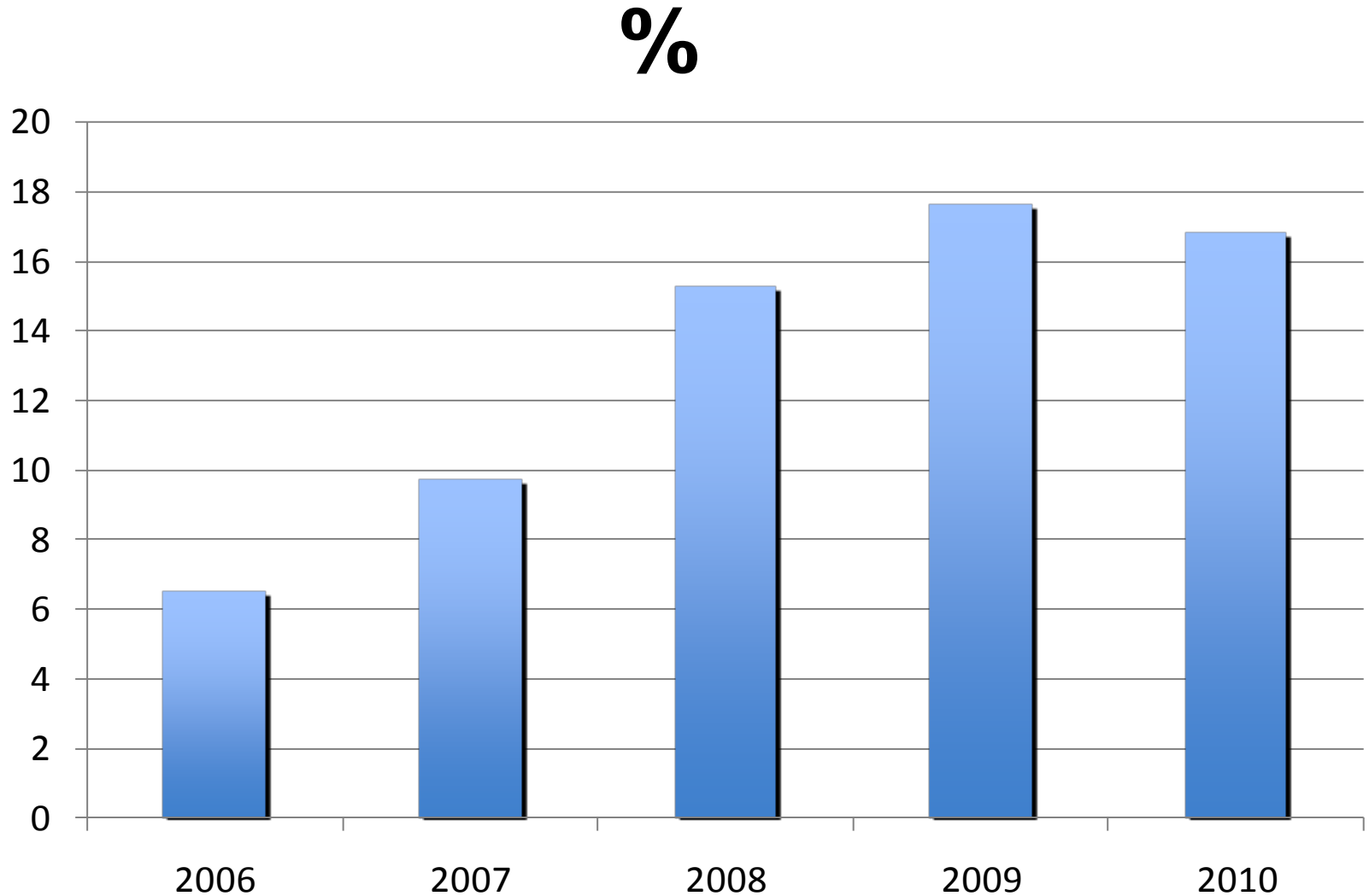


# DPS Vessels Entering ABS Class

ABS Class (2005 to 2009)



# ABS Vessels with DPS Notation



# Dynamic Positioning Systems



# Question 1

ABS DPS Class notation numbers mirror the IMO consequence classes, yet neither demand any particular environmental capability.

**Is this an omission?**



## Question 2

**How do we  
verify the capability plot?**



# Question 3

The IMO Guidance states  
“Bus-tie breakers should be open during  
equipment class 3 operations,  
unless equivalent integrity of power  
operation can be accepted  
according to...”

**ABS does not have an equivalent  
statement, but is this intent applied?**





## Question 4

ABS requires an Emergency Shut Down, but this could introduce a single point of failure which is to be avoided for DPS-2 and DPS-3 operations.

**How can ABS have such contradictory requirements?**



## Question 5

In real life equipment is subject to wear and tear and breakdowns.

**What is the ABS position when equipment, which is subject to the ABS DP Class requirements, is not available day-to day and at the time of survey?**



## Question 6

**ABS requirements are silent on the subject of combined operations, but combined operations are frequently the norm rather than the exception?**



# Question 7

Last year ABS introduced more DP-specific survey requirements.

**Does ABS have any plan to accept the reports of other independent specialists in lieu of ABS surveyor attendance?**



# Question 8

**What about the future?**





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