

# Regulating the international diving industry

An attempt of an overview

Einar Wold Svendsen



## Why should we regulate the diving industry?

- We want, and need, a safe and efficient diving industry in order to :
  - Survive as the preferred underwater intervention method
  - Secure prosperity for shareholders, employers and employees
  - Secure the best solutions for the customers
  - Contribute towards sustainable exploitation of resources to the best of our countries and the international community
- All experience show that a well organized and regulated industry is the best tool to achieve above goals



## How should we regulate the diving industry?

- Diving, or at least offshore diving, is a truly international industry where companies, personnel, vessels and equipment operates world wide and routinely crosses national borders and international waters
- Such mobility is necessary in order to optimize the utilization of the relatively expensive resources involved, i.e. personnel, vessels and equipment
- It is therefore sensible to ensure "seamless", international mobility for these resources through internationally harmonized regulations

# Regulation Hierarchy

## First line

Divers and support personnel, through their competence and safety consciousness

Internal diving company Procedures, "best practice's"

Classification Institutions Class requirements

## Second line

National Trade/Industry organizations  
Guidance notes and codes

Customer criteria  
Contractual requirements

National standardisation organizations  
National standards

National Regulators  
National laws and regulations

## Third line

International Trade Organizations  
Guidance notes and Codes

International Customer Organizations  
Common customer criteria  
Common contractual requirements

International Standardisation organizations  
International standards

International Regulators Forum  
Common Directives,  
Agreements on common regulations

# Regulating the diving industry - Status

- The influence of the Diving personnel is more important than ever before. Increased average age gives extensive experience and competence within the team, as well as increased safety consciousness.
- Improvement potential : large, must be maintained in spite of new recruitment required
- Internal diving company best practice`s are still important, but can be dispensated from at company`s discession
- Improvement potential : slight to large, depending on enforcement



# Regulating the diving industry - Status

- National and international standards (ACOP's, NORSOK, EN, ISO, IMO, EDTC) have to a large extent replaced individual customer requirements.
  - Compliance verification is up to company and/or customer
- Improvement potential : Large, depending on enforcement strategies
- National laws and regulations are still important, but in the international perspective, differences in requirements is a problem in itself for units moving across borders.
  - Both requirements and enforcement varies from non-existing to strict.
- Improvement potential : Slight



# Regulating the diving industry - Status

- Class requirements (Lloyds, DNV, GL etc.) are commonly applied, as many systems and vessels are kept in class.
  - Follow up is well organized through routine, periodic surveys.
  - Does not cover organizational issues and operational practices!
- Improvement potential: Significant.
- International Trade Organizations Guidance (IMCA – ADCI) notes and codes.
  - By nature, trade organizations work to enhance the interests of their members, i.e. the diving companies. Resulting benefits for the employees are purely co-incidental
  - Give very good guidance, however, they cannot be enforced!
  - Unfortunate that IMCA and ADCI cannot agree on common set of guidance notes
- Improvement potential: Slight to large



# Regulating the diving industry - Status

- International Customer Organizations (OGP).
  - Common criteria established, is standard high enough to result in notable improvements?
  - Introduction and enforcement remains to be seen.
  - Too few of the international oil and gas producers participate in the group working with diving related problems
  - Common contractual requirements not yet in place
- Improvement potential: Large (largest?)



# Regulating the diving industry - Status

- International Regulators Forums (IRF, NSOAF, IDRFB)
  - Too few countries participate (14 in total for all three organizations).
  - Participants are so called "developed countries", transfer of experience to developing countries as well as international harmonization suffers as a result
  - With the exception of mutual recognition of respective diver certification, no common requirements have been presented.
- Improvement potential: Large



## Areas in need of effective regulation

### Competence

- Diving personnel competence and safety consciousness
  - Competent and safety conscious divers, supervisors and support personnel in general, is by far the most important factor to enhance safety and efficiency within the diving industry
- Status
  - Weak and "none-targeted" selection criteria for divers
  - Shorter, cheaper courses for divers and supervisory personnel
  - Diver training is mostly pure safety training, divers would be safer with competence in the job they are supposed to do and the tools they are supposed to use
  - Lack of harmonization internationally, impossible to know which competence level various certificates implies.
- Improvement potential: Large



## Areas in need of effective regulation

### Competence

- Sub Sea Engineers planning jobs to be performed by divers, should have extensive knowledge about the possibilities and limitations of diving as a tool
  - Status
    - To a large extent neglected in the industry
- Personnel managing or overseeing diving operations should have extensive knowledge about the possibilities and limitations of diving as a tool as well as safety implications
  - Status
    - To a large extent neglected in the industry
- Marine personnel on diving vessels should be well aware of the relation between their role onboard and the safety and efficiency of the divers
  - Status
    - To a large extent neglected in the industry
- Improvement potential: Significant



## Areas in need of effective regulation

### Recruitment of personnel

- Currently recruitment is done mainly from the "inner circle", consisting of already established personnel and through acquaintance and friendship
  - "freezes" the diver community and hinders the introduction of "new blood" and new competence
  - Contributes towards an ever ageing diver population
  - Ensures high level of experience
- Recruitment should strive to maintain high level of experience **and** to ensure the introduction of young, competent personnel that will bring the industry forward
- Improvement potential: Significant



## Areas in need of effective regulation Employer/employee relations

- Motivated, loyal and secure personnel are crucial in order to succeed in moving the company and the diving industry forward, in competition with other methods
  - Status
    - Divers and diving support personnel are "temporary personnel" and will not have the motivation and the loyalty towards their employer that is required in order to achieve excellence in performance
    - Lack of job security can result in cover-up of undesired practices as well as personal problems that might compromise the safety of both the individual and his team members, and therefore also the integrity and general standing of the company and the industry
- Improvement potential: Significant

## Areas in need of effective regulation

### Operational

- Diving Tables for compression, excursion and decompression are based on empirical data and not scientific proof, because the mechanisms at work are not fully understood.
- This should call for a conservative approach when choosing diving tables to be used, as well as an international effort to :
  - Harmonize diving tables in use, in order to
    - Collect comparable, empirical data to strengthen the basis for use and to improve tables based on common experiences
    - Coordinated international research to uncover the mechanisms at work
- Status.
  - No effort to harmonize diving tables
    - A commendable effort to collect empirical data has been initiated between UK and Norway (Diving Data Register). Weaknesses are that too few participate, that different tables are used (results difficult to compare) and that examination protocols are not harmonized.
    - No internationally coordinated research to uncover mechanisms
- Improvement potential: Large



## Areas in need of effective regulation

### Technical

- Technical status of diving systems, equipment and tools is far behind, compared to the general technological level of the world today
  - Efforts are made to close the gap with DSV`s currently being built – the result remains to be seen
  - Solutions are fragmented and lacks coordination, which might present a problem in a small industry/market
  - New technological solutions/improvements need widespread use in the industry to enhance acceptance and optimalization
- Technical developements are mainly driven by customer requirements, rather than by diving companies and system/equipment manufacturers
  - Insentives should be sought to encourage manufacturers and diving companies to maintain technological developement as a tool in the continous improvement proses.
- Improvement potential: Large



## Areas in need of effective regulation

### Contingency measures

- Contingency measures to provide a realistic possibility of rescue for divers under pressure in the event of serious incidents, generally leaves a lot to be desired in the international diving community
  - The need for means for hyperbaric evacuation and recovery/normalization of the situation, has proven itself through experience and should be as natural as lifeboats and other means for general evacuation of vessels and platforms
  - Lack of harmonization of requirements on this issue, effectively hinders the mobility of resources and fair competition between diving companies.
- Improvement potential: Significant