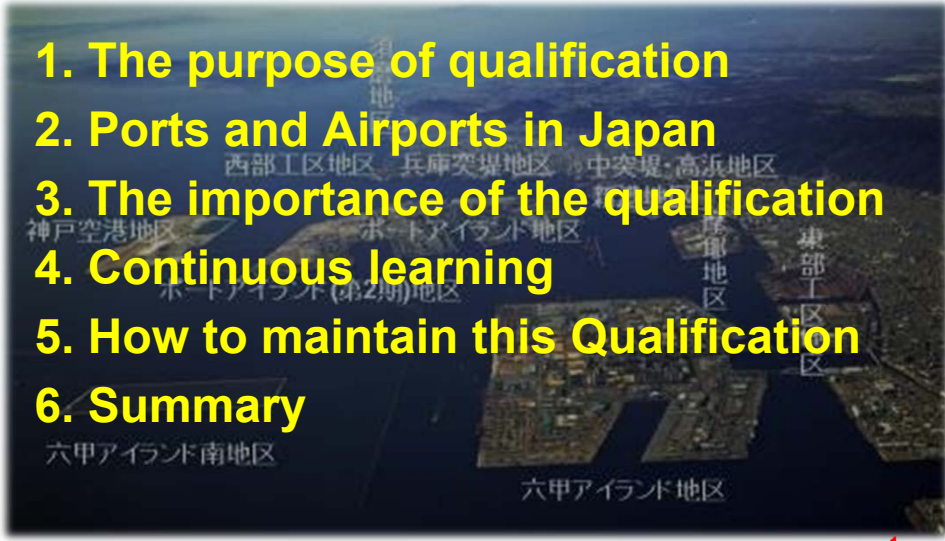




Topics of today



1. The purpose of qualification
2. Ports and Airports in Japan
3. The importance of the qualification
4. Continuous learning
5. How to maintain this Qualification
6. Summary

1

The background image for the topics list is an aerial view of a port area with various regions labeled in Japanese. The labels include: 西部工区地区, 兵庫突堤地区, 中突堤・高浜地区, 神戸空港地区, ポートアイランド地区, 六甲アイランド南地区, 六甲アイランド地区, 東部工区地区, 岸部地区, and ポートアイランド(第2期)地区.

1-1. What is Marine Construction Works



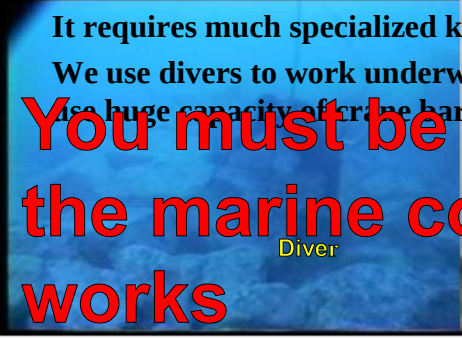
Marine construction works will be exposed with severe marine environment such as winds, waves, currents and sometime suffered with typhoons.

However we need to concur the difficulties and must complete safely in time.

It requires much specialized knowledge and experiences.

We use divers to work underwater and sometimes we need to use huge capacity of crane barge.

You must be an expert in the marine construction works



Diver



Crane barge

2

1-2. An example of marine construction



Structure of the breakwater

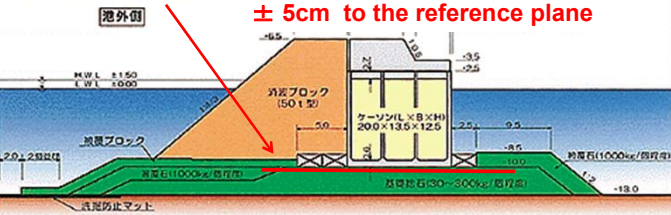


caisson

wave off block

riprap foundation

Smothing foundation sacrifice stone



港外側

± 5cm to the reference plane

消波ブロック (50 t 1 50)

ケーソン (L×B×H) 200×135×125

地盤石 (1000kg/立方m)

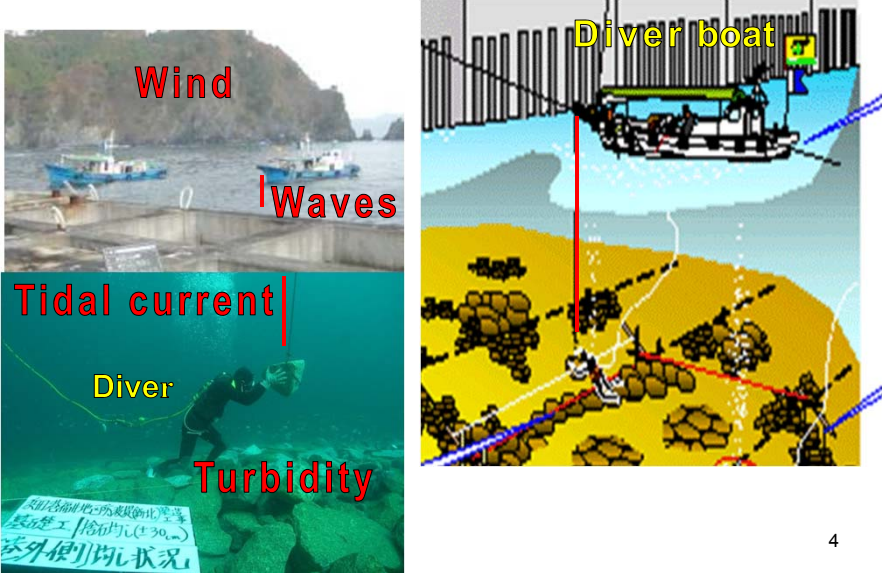
基礎地石 (30~300kg/立方m)

点荒防止マット

3

2

1-3. An example of marine construction



4

1-4. The purpose of airport construction works

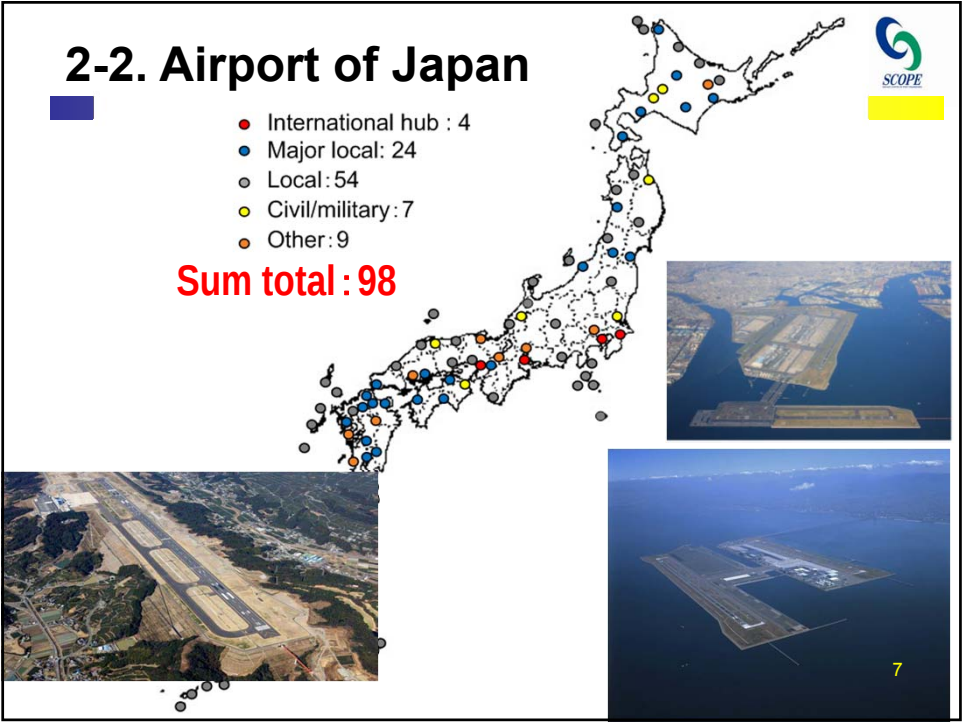
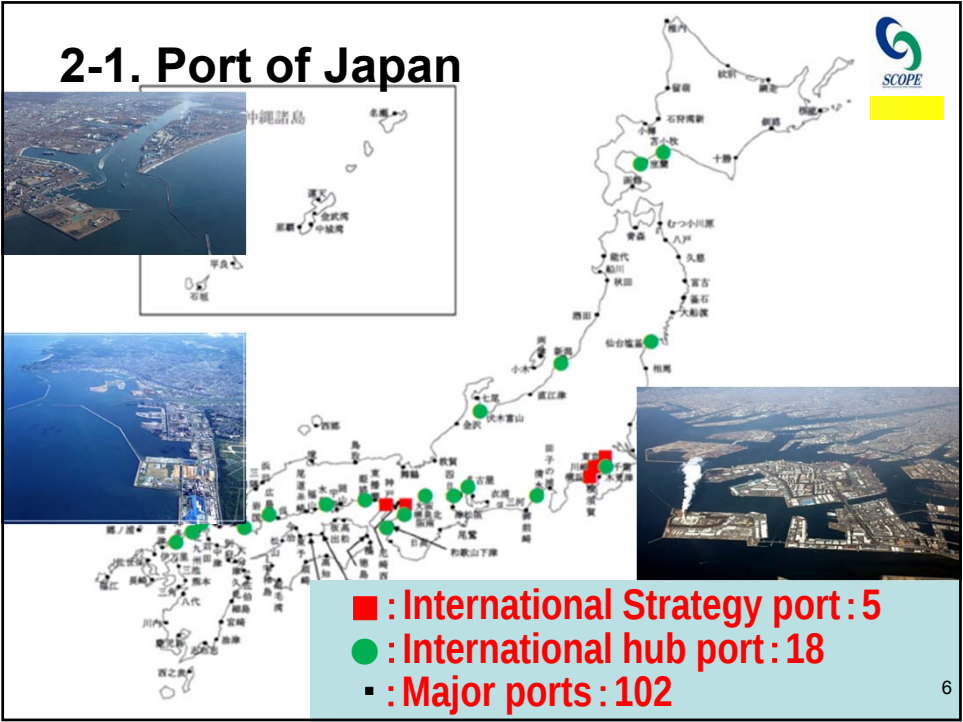
The Less Airport Construction

The Less Chance to Learn

How to Transit Know-how to the Future



5



3-1. The importance of the qualification



- **Qualifications by Government**

- Medical license, lawyer

It is defined by the law

- **Qualifications by Private**

- Is specialized in the field highly professional
- Continue to education on an ongoing learning
- Promote the tradition of technology

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3-2. Features of qualification



- **National qualification**

It supports the construction of all kind of works

→ Specialized fields is not clarified

lifetime guarantee

→ There might be a losses in the technical knowledge

- **Private qualification**

Specialized construction classification

→ Ensure disciplinary

Update of qualification

→ Ensure technical level

Also required mechanism of either

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3-3. Kind of target works

Classification I
dredging



Classification II
concrete structures



Classification III
steel structures





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4-1. Continued learning

• Items to be certified continuous education are

Execution experience
Reports submitted for the engineering works
Attendance of the workshop sessions

200 points in five years: requirement for renewal



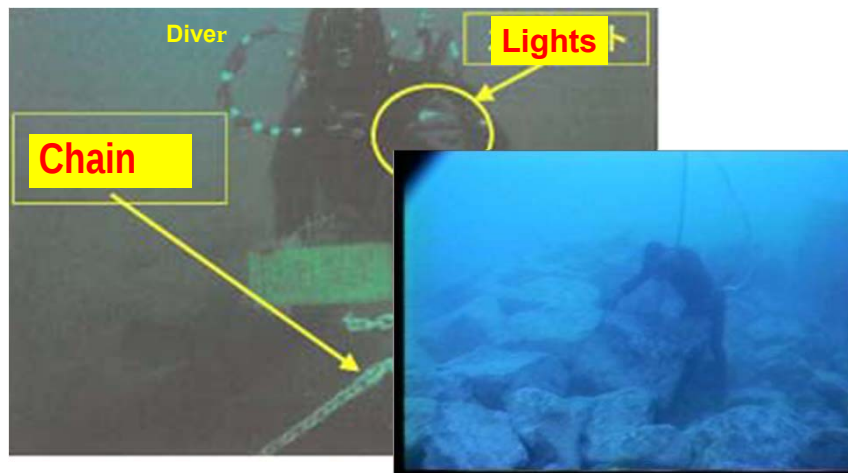


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4-2. Tradition of technology



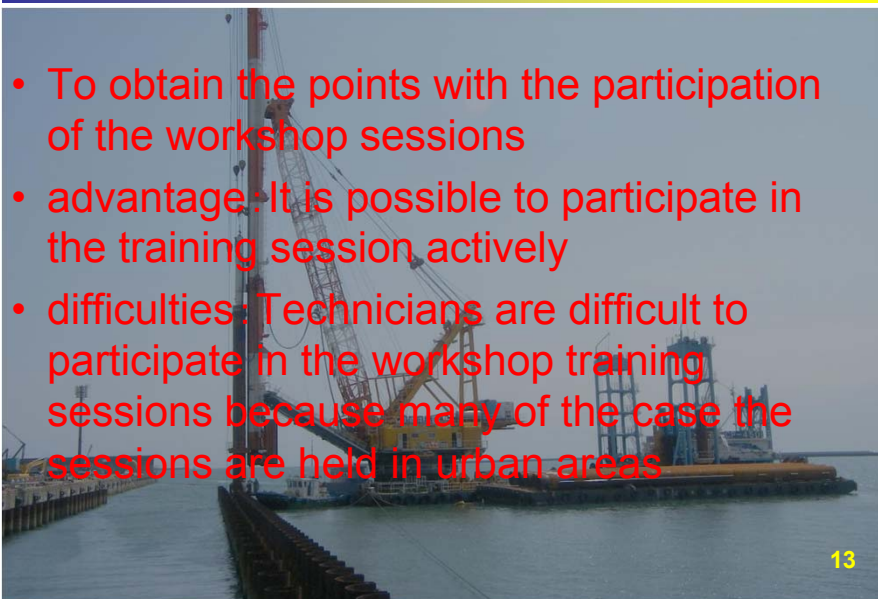
We do not seek originality and academic content and novelty for the work but Traditional know-hows.



4-3. Attend the workshop



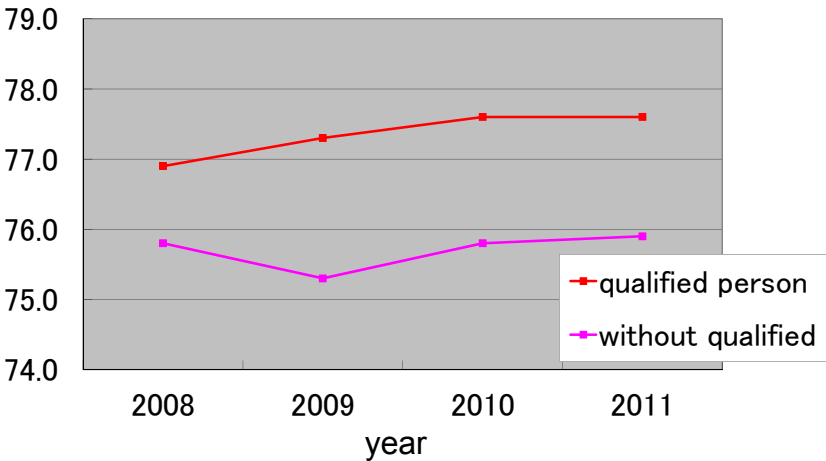
- To obtain the points with the participation of the workshop sessions
- advantage: It is possible to participate in the training session actively
- difficulties: Technicians are difficult to participate in the workshop training sessions because many of the case the sessions are held in urban areas



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5-1. Evaluation of the superiority of qualification

work performance evaluation



14

5-2. Case Study of Utilizing Qualifications

Comprehensive evaluation bidding method

$$\text{evaluated value} = \frac{\text{grade point}}{\text{bid price}}$$



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6. Summarize



Responsibility of Issuing Organizations

- ① on a neutral and impartial ground
 - Ensure compliance
- ② Brush up content
 - Technology is changing every day

Responsibility of the Engineer

- ③ Dissemination of information
 - Public relations
- ④ Tradition of technology
 - Accumulation and sharing, a database of information
- ⑤ Training of engineers
 - Leadership role, self-study

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Thank you for listening to
my speech today

