



Bureau of Safety and Environmental Enforcement

BSEE - Sponsor Agency Report

John Cushing

Chief, Safety Inspection & Renewable Energy Section

Marine Board Fall Meeting – November 10, 2016

“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”

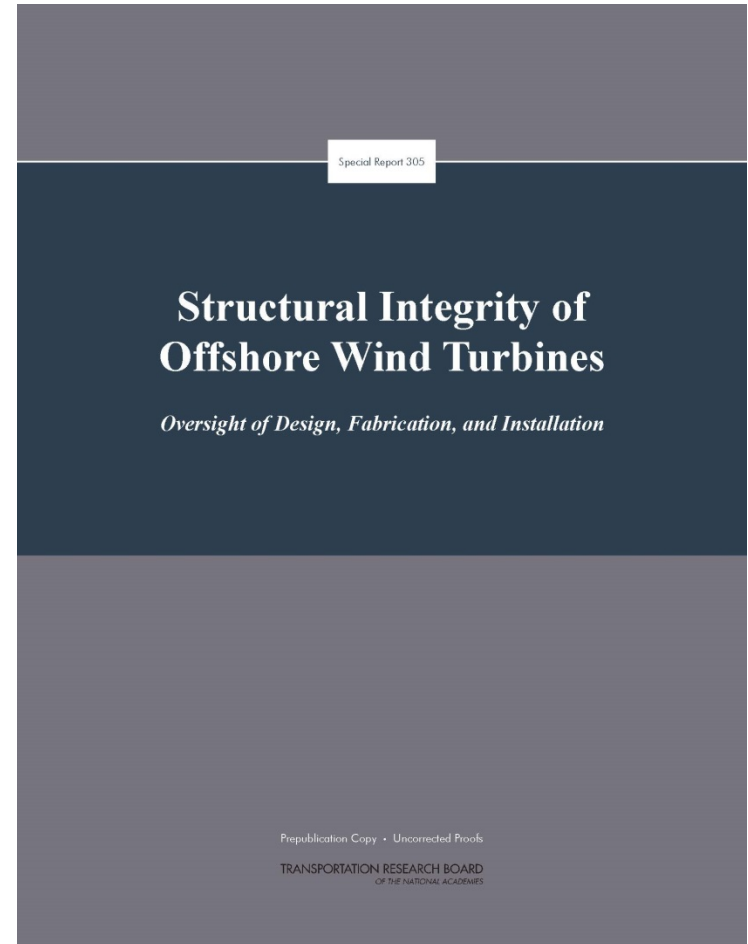
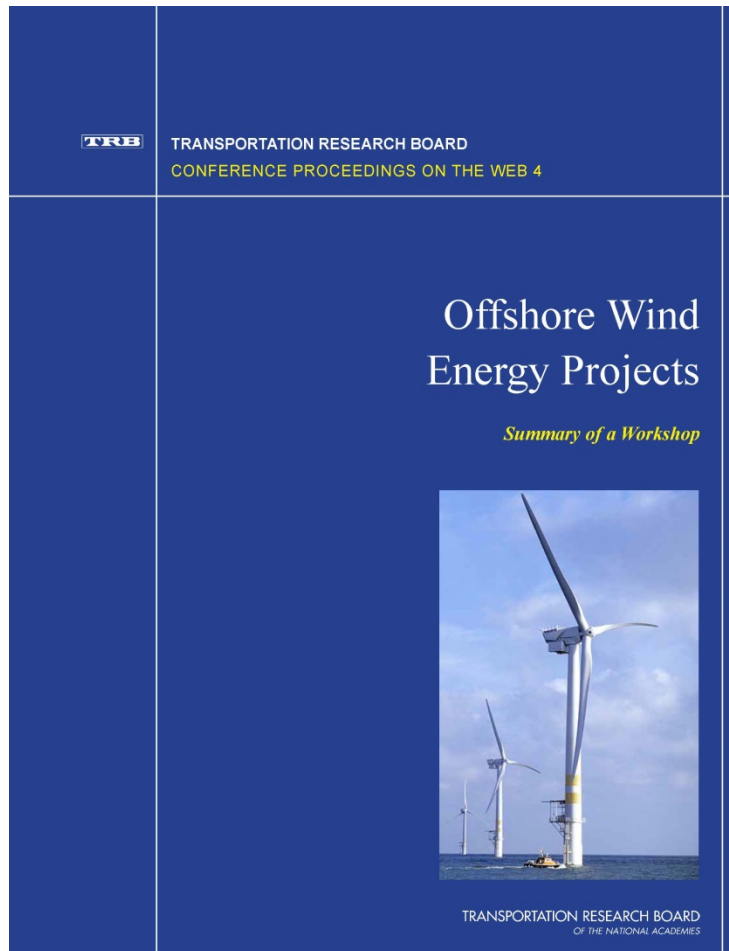
Outline

- Offshore Wind Energy
- Real-Time Monitoring
- Bolt Failure Workshop
- Roundtable on Unconventional Hydrocarbon Development

Offshore Wind Energy

Workshop date:
March 2010

Study Report publication date:
April 2011



Offshore Wind Energy

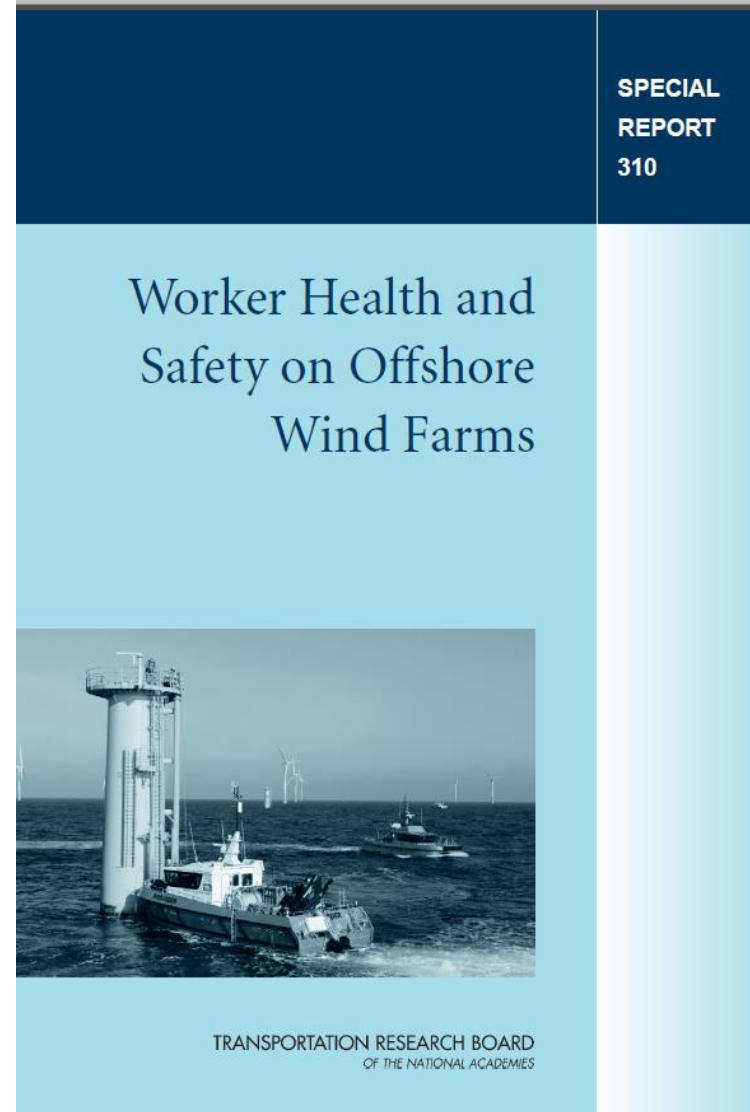
Study Report publication date:
November 2013

Study Committee:

- James C. Card (Chair)
- Thomas J. Lentz
- Gerald E. Miller
- Edmond J. Moran, Jr.
- Jakob Nielsen
- James W. Platner
- Jennifer L. Schneider
- Robert E. Sheppard
- Michael A. Silverstein
- Brian Walencik
- David H. Wegman

Study Director:

- Mark S. Hutchins



Offshore Wind Energy



Offshore Wind Energy



Offshore Wind Energy



Offshore Wind Energy



Offshore Wind Energy



Real-Time Monitoring

Publication Date:

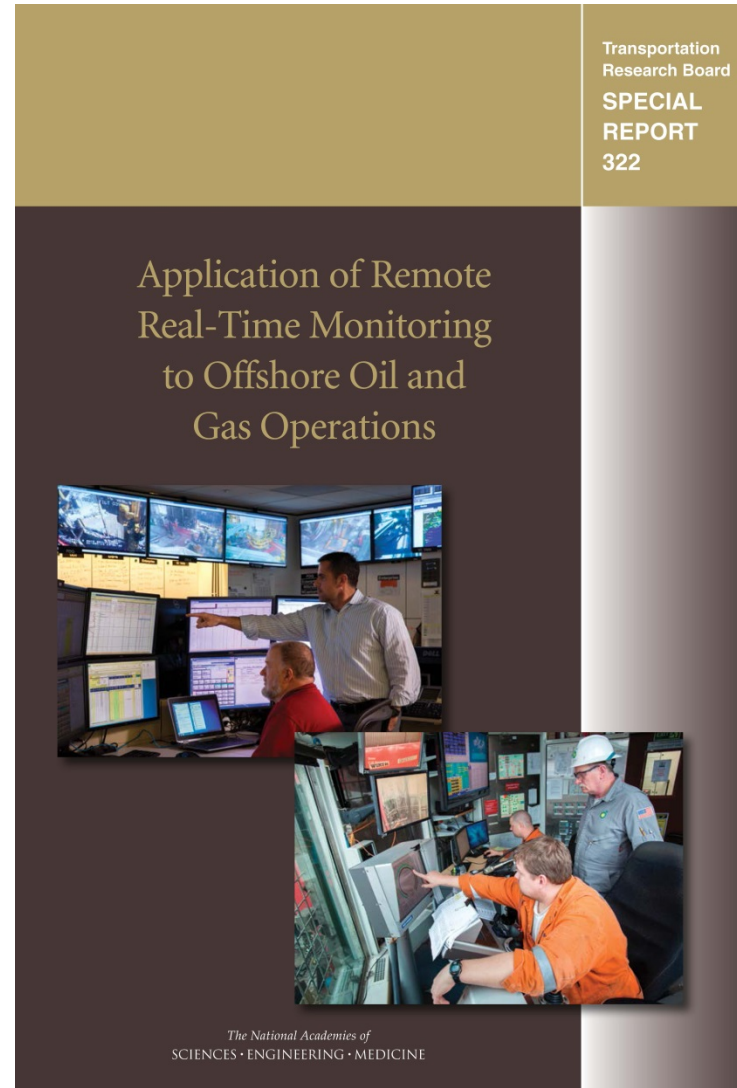
July 2016

Study Committee:

- Richard A. Sears (Chair)
- James S. Crompton
- James S. Dyer
- Paul S. Fischbeck
- James H. Garrett Jr.
- N. Wayne Hale Jr.
- Stig O. Johnsen
- Morrison R. Plaisance
- Manuel Terranova
- Peter K. Velez

Study Director:

- Mark S. Hutchins



Bolt Failures

Bolt Failures - low carbon alloy steel:

- Fasteners on LMRP and Well Head Connectors
- Blind Shear Ram Fasteners (BSR Actuator Assembly and Shear Blade to Casing Ram Block)
- BOP flange
- Wing Valve Assembly (on Christmas tree)



Bolt Failures



Figure 4: Hydraulic connector flange/fasteners showing failures and first engaged threads

Bolt Failure Workshop

Purpose:

- Study to address, advance and develop an understanding of the outstanding bolt failure issues of subsea connector performance.
- Conduct gap analysis of industry standards for bolt material properties & requirements among various industries – O&G, military, naval/marine, pipeline, aerospace, nuclear, automotive, etc.
- Determine the alternative/optimal material properties for bolts used for subsea – materials (yield strength, tensile strength, hardness, heat treatment, etc.), design, coating, cathodic protection, failure types and mechanism, quality requirements, etc.

Status:

- BSEE initiated contract with National Academies on 13 Sept 2016
- BSEE held kick-off meeting on 5 October 2016
- Expected workshop date: Jan or Feb 2017

Roundtable on Unconventional Hydrocarbon Development

“Unconventional Hydrocarbons” include, but are not limited to:

- Shale gas and shale oil
- Oil shale
- Tight gas and tight oil
- Oil sands
- Coalbed methane
- Methane hydrate

Specific topics to be addressed:

- Water and water management
- Methane emissions
- Induced seismicity

Roundtable on Unconventional Hydrocarbon Development

Purpose:

- Identify and critically evaluate available scientific data and information in a neutral forum.
- Gather, examine, and communicate facts and data about unconventional hydrocarbon development to help inform decision making and advance the work of various stakeholders.

Status:

- Roundtable includes 22 members
- 3-year project that kicked off in Sept 2015
- Partially supported by BSEE
- Directed and administered by the National Academies' Division on Earth & Life Studies (Dr. Elizabeth A Eide)
- Other National Academies' units will be engaged, including the TRB

BSEE Website: www.bsee.gov



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