Prevention First 2018

Tiffany Rau
Director of Government and Public Affairs
Port of Long Beach welcomes TAQAH – deepest draft tanker to call in U.S.
Port's Main Channel is 76 feet deep
Andeavor technology increases safe draft from 65 feet to 68.7 feet
New record of 2.1 million barrels unloaded from one tanker
Enough to make 42 million gallons of gasoline
Innovation means fewer ships, less pollution
Congratulations to the Andeavor Team!
Long Beach Deep Draft Tanker Under Keel Clearance Project

Ports
Los Angeles & Long Beach

The Pitch Problem
in a Long Period Southerly Swell

Zero Pitch
11' Static Under Keel Clearance (UKC)

1 degree of Pitch
10' increase in draft for a 1,100 foot tanker reduces the UKC to 1'

PROTIDE
Adoption & Use

ABOUT PROTIDE
- PROTIDE is used in the ports of Rotterdam, Amsterdam and Emshaven
- Calculates Vertical Ship Motion (Pitch, Roll and Squat). UKC and Bottom Touch Probability

USES PREDICTED
- Water levels
- Currents
- Wave conditions
- Channel depth
- Ship Course and speed
- Ship dimensions

Shared Value Goals

Increase safety
- By reducing the risk of an accidental grounding due to pitch or roll

Increase efficiency
- Provide Pilots and Ship Captains the information necessary to adjust arrival time based on the forecasted conditions to transit directly to the berth

Reduce emissions
- Enable VLCCs to avoid; lightering, double handling cargo and additional tanker to offload the lightered crude oil, thereby reducing stack and hydrocarbon emissions

Reduced risk during transportation and transfer of crude oil
- Fewer transfers at Pacific Area Lighterage (offshore)
- Transfers in protected harbors at berth
- More efficient use of port infrastructure

Reduced personnel exposure
- Mooring operations
- Crew fatigue

Reduced demurrage
- VLCC’s
- Daughter vessels
Investing in **STRONG PORTS** by collaborating with our partners on the Dynamic Under Keel Clearance Program