

# HiLoad LNG Offloading System

- enables safe tandem LNG offloading to any conventional LNG Carriers -

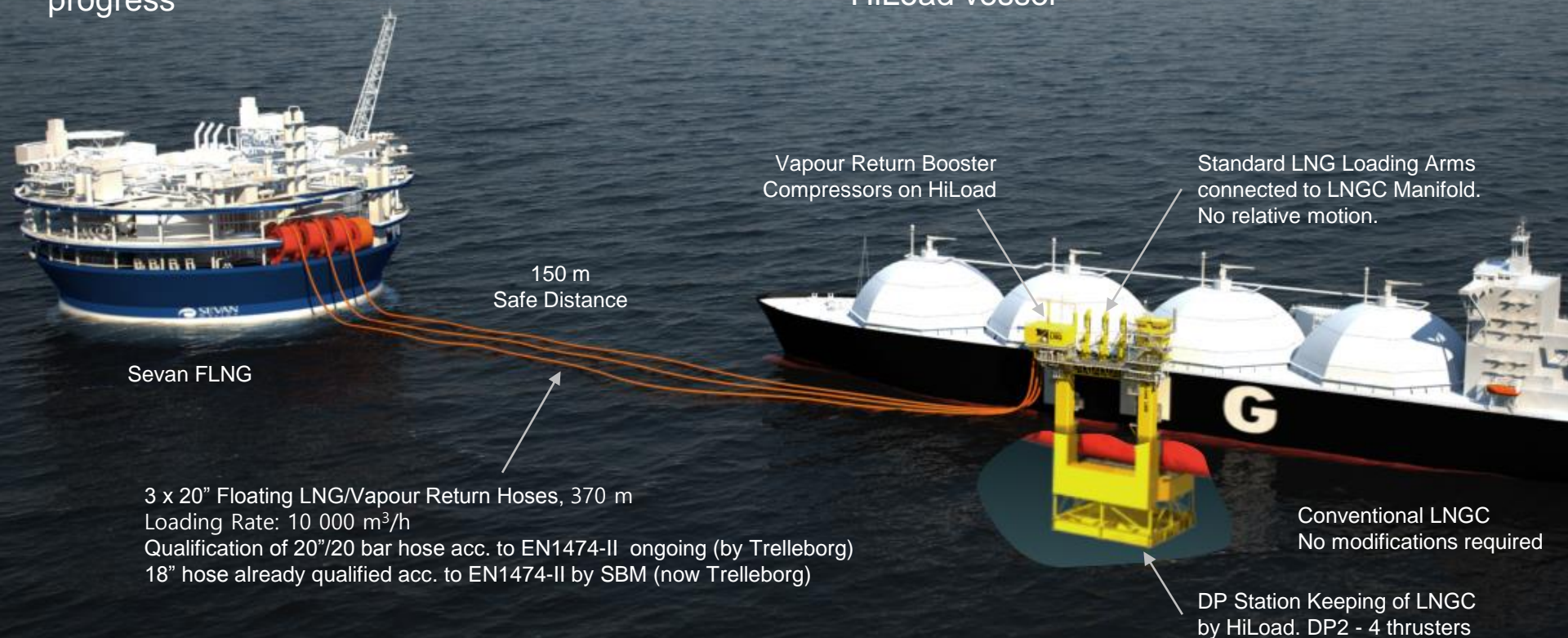


# HiLoad LNG – Key Particulars



- Operation with ANY LNGC – No mod. required
- High regularity: operation in  $H_s = 4.0$  m
- Safety: 150 m separation - DP2 Station Keeping
- Final qualification of critical LNG components in progress

- Operation with first HiLoad DP starting in Brazil in February 2014 (by Remora for Petrobras)
- HiLoad provides Roll Reduction of LNGC = reduced sloshing
- LNG, LPG and Condensate Offloading by same HiLoad vessel





# Key LNG Components



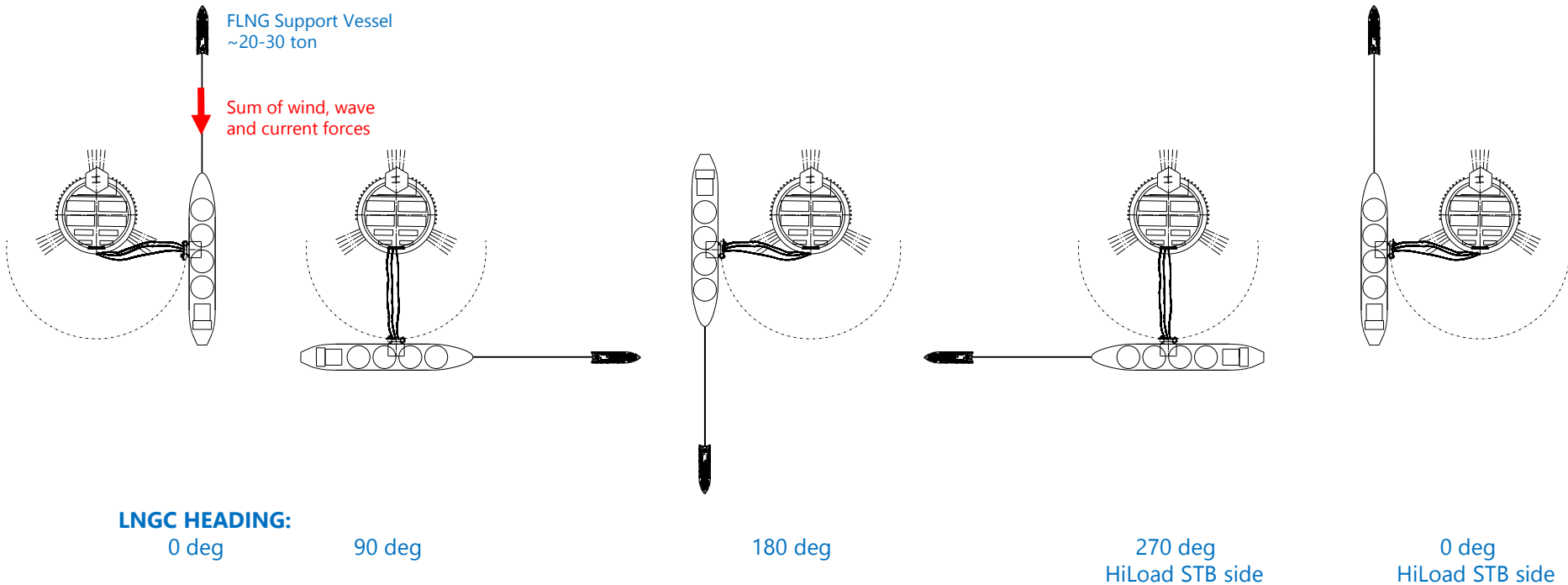
Standard LNG Loading Arms  
connected to LNGC Manifold.  
No relative motion.

Vapour Return Booster  
Compressors on HiLoad  
3 x 50% capacity

3 x 20" Quick Connect/Disconnect Hose  
Coupler from LNG/Vapour Hoses.  
System approval acc. To EN 1474-3

20" Condensate Hose Coupler  
Typical BLS used for  
Shuttle Tankers

# 360° Weathervaning of LNGC from Sevan FLNG

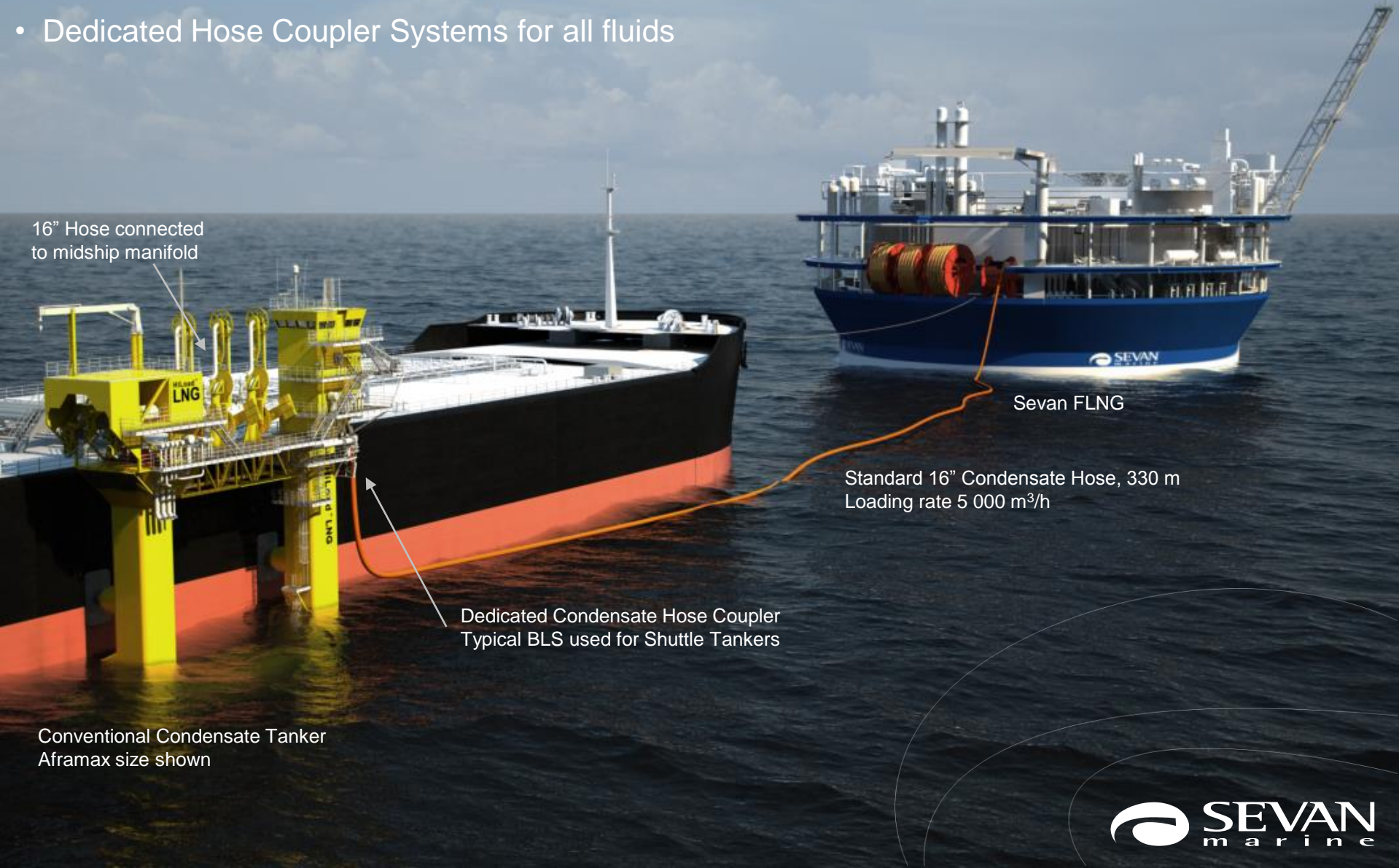




# LNG, LPG and Condensate Offloading by ONE HiLoad



- ONE HiLoad designed to handle LNG, LPG and Condensate Offloading
- Dedicated Hose Coupler Systems for all fluids



16" Hose connected  
to midship manifold

Sevan FLNG

Standard 16" Condensate Hose, 330 m  
Loading rate 5 000 m<sup>3</sup>/h

Dedicated Condensate Hose Coupler  
Typical BLS used for Shuttle Tankers

Conventional Condensate Tanker  
Aframax size shown

# Highlights – HiLoad LNG



## ANY LNGC

Any conventional LNGC can be used.  
Existing fleet utilized.  
High flexibility.

## LOW CAPEX

No need for special purpose built LNGC (with DP and Bow Loading).  
Significant CAPEX savings.

## FOB DELIVERY

Opens up for FOB delivery of LNG at FLNG. Buyer provides LNGC's from existing fleet. LNGC CAPEX commitment avoided.

## SAFETY

Tandem Offloading provides enhanced safety compared to side by side loading.  
150 m - safe distance.  
DP2 Station Keeping

## QUALIFICATION

Final qualification of critical LNG components in progress.  
HiLoad DP starting operation in Brazil in February 2014.

## HIGH UPTIME

Operation in Hs 4.0m  
Roll Reduction of LNGC = Reduced Sloshing.  
Safe DP approach of LNGC to FLNG.