GBS LNG: A NEAR SHORE CONCEPT FOR LNG DEVELOPMENT

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TOTAL

**GBS concept for LNG**

- LNG plant protected from waves over-topping
- Storage for LNG, LPG and Condensate
- Breakwater for LNG and condensate carriers
- Berthing & offloading facilities for carriers

**Breakwater design screened**

Various shapes, lengths, widths

Met-ocean statistics & Real time analysis used

**Graving dock & GBS hull arrangement**

GBS Draft w/ Topside = 14 m
with Topside = 16.5 m

Concrete per GBS:
- Volume = 90,000 m³
- Mass = 32,000 T

**GBS LNG General arrangement**

GBS LNG Schedule & cost

- Project Critical path:
  1. Dry dock establishment
  2. GBS casting
  3. Liquidation modules
  4. Offshore Commissioning

**Alternative to DRY DOCK**

- Breakwater benefit for barge loadout
- Reduced number of modules
- Offshore integration: Jack-up & skidding
- Reduced offshore hook-up & commissioning

**GBS design is 1st based on jetty availability**

<table>
<thead>
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<th>Model</th>
<th>Criteria</th>
<th>Spacing</th>
<th>Carnage common to K02</th>
<th>Carnage common to K04</th>
<th>Number of modules needed</th>
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<td>1st at lift</td>
<td>0.0%</td>
<td>83.3%</td>
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<tr>
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<tr>
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</table>

**Loads on GBS top slab & vertical walls**

**GBS LNG Schedule & cost**

- From FID to 1st LNG drop = 60 months

**Research & Innovation Showcase**

研究与创新展示