



**Crondall**energy

Floating Production & Subsea Specialists

**Can we safely reduce the time & effort spent on Subsea Pipeline Trenching?**

**Stephen Booth – Crondall Energy; Graeme Rogerson – OGTC; Jerry Baker – Baker Marine Technology**

## Why trench a pipeline ?

- 1. Stability – typically only required in Southern Sector**
- 2. Insulation**
- 3. Fishing interaction**

## How do we decide if we need to trench for fishing protection ?

- 1. Industry codes (DnVGL-RP-F111)**
- 2. Project specific engineering studies**
- 3. The '16-inch rule'**
  1. Where from ?
  2. Challenged in 1990's.
- 4. PARLOC 2001. 65 Steel pipe LOC incidents.**
  1. 6 trawl impact. 5 small diameter (2 or 3 inch). 1x10-inch.
  2. 26 corrosion

**Work performed by Trevor Jee, published 1996**

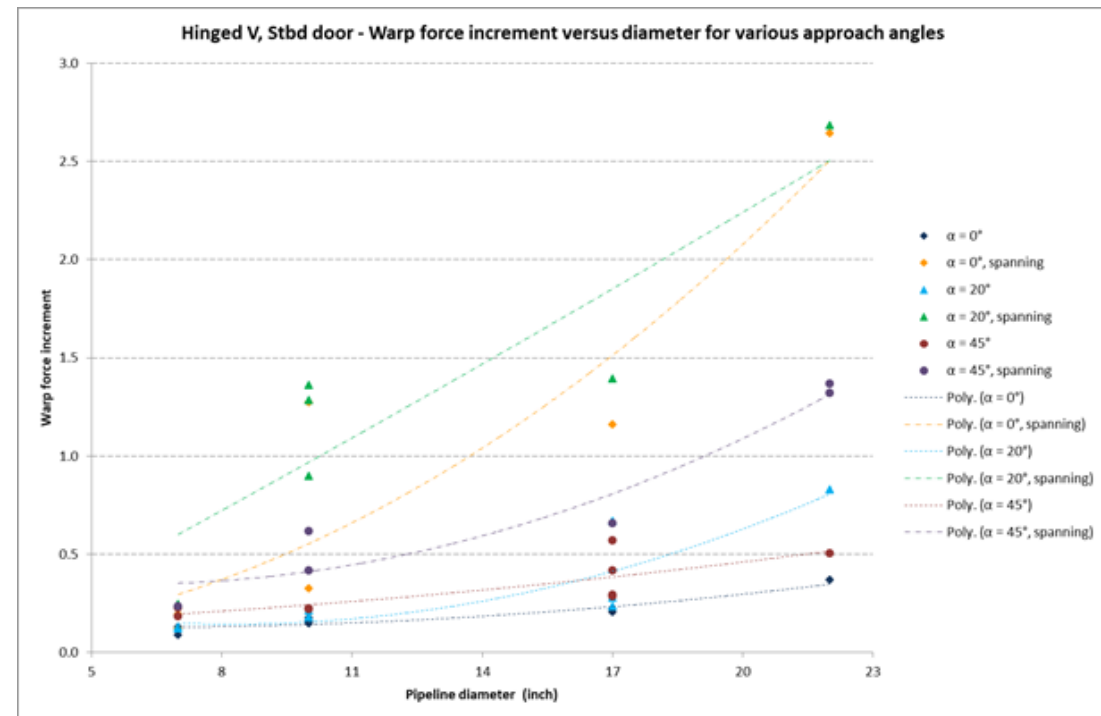
**Model scale pipeline overtrawling trials in SeaFish Industry Authority flume tank in Hull**

**Results show that small diameter pipelines see little load from trawl gear**

**But..**

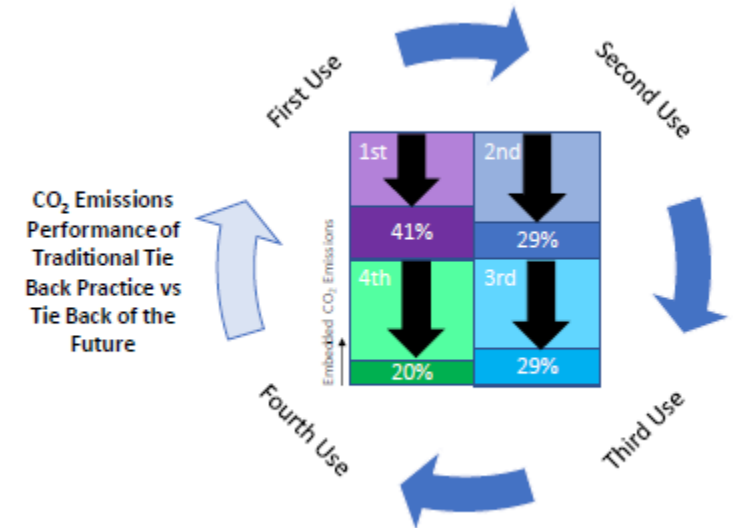
**We still apply the '16-inch rule' !**

**Which imports geotech risks**



# Why challenge now ?

1. **General focus on reducing unnecessary cost**
2. **OGTC Tie-Back of the Future (TBotF) – focus on The Circular Economy**
  1. Halve the cost
  2. Halve the CO2 emissions



## **1. OGTC Project supported by BP, Chrysaor, Shell & TEPUK**

## **2. Work will be performed by RGU & CronDall Energy working closely with SFF**

## **3. Aims:**

1. Improved understanding of fishing activities & loads
2. Revisit historical data of untrenched pipelines. Impacts & loss of containment. Lessons learned.
3. Revisit previous fishing interaction research
4. Consider other inspection techniques
5. What additional data can usefully be shared between Oil & Gas & fishing industry ?
6. Identify win-win opportunities with fishing industry
7. Consider feasibility of pipeline recovery
8. Revisit CAPEX & OPEX – what's the commercial prize ?
9. Conclusions

## Thank you

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