INSTALLING PILE FOUNDATIONS FOR OFFSHORE WIND CONSTRUCTION – LESSONS LEARNED FROM INNOVATION

Presented by James Russell, Houlder
OVERVIEW

Houlder is an employee-owned company that delivers a cluster of specialist engineering services focussed on our expertise of the marine industries.

Services include;

- Naval architecture, structural & mechanical design from whole vessels, through modifications and specialist equipment.
- Procurement, Fabrication, Installation & commissioning for servicing, upgrades, modifications and specialist equipment
- Project Management & Advisory Services to meet Client needs

Serviced Marine Industries include; MODUs, FPSOs, Windfarm Installation vessels, Subsea construction vessels, LNG vessels, Naval vessels and Ferries.
WHAT IS YOUR PERSPECTIVE?
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That looks expensive!
ROUGHNECK USING TONGS
IRON ROUGHNECK

What was once an extremely dangerous process on the rig floor has now become almost completely automated in most drilling situations.

Drillers are relatively removed from the process, increasing safety and efficiency on the rig.
SUBSEA EXAMPLES

Install EDP Guide Spears

Deploy Under Hull Guidance System
INVESTMENT IN INNOVATION

Question:
• Why **do** companies invest in innovative/novel solutions to offshore operational problems?

Answer:
• To reduce operational expenditure (OPEX)
• To reduce human intervention → improve safety
• To reduce obsolescence of equipment/assets
• To obtain a competitive advantage over competitors
STICKING WITH THE STATUS QUO

Question:
• Why **DON’T** companies invest in innovative/novel solutions to offshore operational problems?

Answer:
• Short term £££££££ Saving
• Lack of confidence
• Lack of procurement/ project mechanism
WHAT ARE THE BENEFITS THE INDUSTRY WANTS

• Keep personnel away from hazards (both operating and monitoring)
  • Difficult locations
  • Over the side
  • At height
• Reduce crane time and other critical path items
• Appropriate redundancy
• Easy to operate and maintain
• Good recording & monitoring systems
WHAT GENERATION OF EQUIPMENT ARE WE AT?
GRIPPER ARMS FOR MONOPOLES
SUBSEA TEMPLATES
OUR MARINE EQUIPMENT EXPERTISE

Houlder’s engineers have built a reputation for providing bespoke specialist equipment for use in a variety of applications. We manage the whole process from concept through design, fabrication, delivery, installation, and commissioning.

Previous equipment developed by Houlder includes:

• Pile gripper arms, handling frames and lifting devices
• Pinpile handling and templates
• LNG transfer systems
• Personnel transfer systems
• Cable storage and handling
• RIB handling davits
• BOP and Xmas Tree Skid Carts
• Pull-in systems

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