Lifting and Rigging Seminar
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“Technology add-ons to assist offshore lifting”

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Intro to Straightpoint

- 1976 - Straightpoint was established. We developed the first robust, reliable electronic force measurement device.
- Load monitoring products based on principle of strain gauges and high quality, easy-to-use electronics.
- 2001 - acquired by a team headed up by David Ayling. Focus on growth, innovation and new solutions to improve lifting safety.

Models from 1982 and 2018
Intro to Straightpoint

- Head office in Havant (nr Portsmouth)

- **Our strengths + capabilities:**
  - Major UK manufacturer
  - Trusted and respected worldwide
    - safety, reliability, accuracy, durability
  - We machine, strain gauge, proof test, calibrate in house – up to 350te
Associations & Accreditation

- ISO9001 – audited by Bsi
- Members of Lifting Equipment Engineers Association (LEEA)
- Members of American Wire Rope Federation (AWRF)
- Members of Specialised Transportation & Rigging Association (SC&RA)
- Some members of American Society of Mechanical Engineers (ASME)
- Some products have ATEX, IECEx third party approval by CSA Group
- All products are CE Marked
Load cells for safe offshore lifting

1. Testing lifting equipment
2. Planning the lift
3. Monitoring the lift

If you don’t know what the weight is, how can you lift it safely?
1. Testing lifting equipment

- Lifting operations and lifting equipment regulations (LOLER)
  - “thorough inspection of lifting equipment”
- A load test may be deemed necessary by the competent person
- Wireless
1. Testing lifting equipment
2. Planning the lift. Know a load **before** it is lifted –

**System overview**
- Up to 30 wireless load cells
- Wireless USB antenna
- **Printed report:**
  - individual weights
  - total load
  - x and y coordinates of CoG


DNV-OS-H205 offshore standard

2.3.4.4 The crane hook should be positioned accurately over the centre of gravity of the lifted object prior to commencement of the lift.
2. **Planning** the lift.

Know a load **before** it is lifted –

*From this.....*

- Not rigged to Center of Gravity
- Load is unstable and will shift – C.O.G. will move directly below the hook

*To this.....*

- Center of Gravity is directly below the load hook and connection to load is above center of gravity

Better information ➔ better decisions ➔ less risk ➔ more productive
2. **Planning the lift.**

Know a load **before** it is lifted – COG report

**Applications**

**Why Wireless?**

**Home Screen**

**Report Example**
3. Monitoring the lift

When to use a load cell?

- Tandem lifts
- Multi-point lifts
- Heavy lifts
- Lifts close to WLL
- Lifts that involve angles
- Risk of snagging / overloading
3. Monitoring the lift
- Multi point and heavy lift example

Lifting a refinery module
- Sensitive cargo with tight deflection tolerances
- 12 x 100T capacity Radiolinks
- Ensure forces did not exceed design criteria
- Monitored and recorded throughout the lift
- Prove to the client a safe/proper lift had taken place
Other measurement devices

**Wire rope tension**
Clamp on tensiometer
5mm to 25mm wires
0-5000kgf

**Loadpins**
Custom made to order
Wired or wireless. Add load sensing to lifting equipment

**Hazardous Areas**
ATEX/IECEX
Approved for zones 0,1,2 (gas)

**Bluetooth with app**
Connect to phone
Log data
Conclusions

- Straightpoint - established +40 years with strong capabilities
- Load cells ensure safe offshore lifting – using measurement not guesswork
- 3 key areas
  - Testing lifting equipment
  - Planning the lift
  - Monitoring the lift
- Communication is essential
  - Experienced in load monitoring - I am here to help!

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Straightpoint – making the lifting industry a safer place.
Thank you for your attention