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Samples of Technical Copywriting

1. Extracts from a script for an internal information video for a company's new production system

PLM stands for 'Product Lifecycle Maintenance', a digital platform able to centralise various elements of the production process into a single digital thread. This will allow us to see and manage how products transition through each phase, from inception, commercial bid, engineering design and supply chain stages, through to delivery, installation, operation and eventual decommissioning.

Imagine the genetic make-up of all our products and processes being unified into a single strand of DNA. The digital thread provides ways to improve how we handle processes, collaborate, communicate and manage what we do. By concentrating on standard, structured products, supported by Model-Based Enterprise philosophy, each product will, in future, have a 'digital twin'.

PLM will digitally connect customer requirements to our product definitions, enabling us to tailor our inventory and transform from 'engineer-to-order' to 'configure-to-order'. This will help us get our products to customers faster and at a more competitive price. It will also enable us to create a seamless flow of connected product data through our integrated enterprise business systems.

2. A trade magazine press release for a hydraulic systems manufacturer. Very little information was provided.

Hycom (part of Hydac) has begun construction work on a new overseas order for Jurong Shipyard Pte Ltd. The company's innovative Hydraulic Power Unit (HPU) and control system were commissioned for installation on Heerema's semi-submersible crane ship *Sleipnir*, which is currently under construction in Singapore.

Hycom's HPU comprises several components, principally ten 400 kw, water-cooled electro motors - each weighing 100 tons and with a 13 x 4.5 metre footprint. Each of these is fitted with a 360 cc axial plunger, electronic flow meter, flow control (to 350 bar), and double vane pump for the boost and conditioning circuit. A number of smaller electric motors for pumping pilot and heating oil are also included in the order, along with water coolers and storage tanks.

This is a very similar commission to that provided for an earlier Heerema vessel; Hycom's innovative approach to the design and construction of power system technology, with simpler, more reliable and flexible solutions, is clearly popular with vessel builders. The HPU and heat management system, for example, are developed by Hycom in a modular fashion to achieve significant weight reduction.

Hycom specialises in large and challenging engineering projects, producing all the design drawings and models in-house. Important to customers is the company's robust understanding of the latest standards and regulations established by certification authorities. Working closely with Jurong's project team at the shipyard and Heerema's own technicians, Hycom expects the HPU components to arrive in Singapore this coming November.

3. Product promotional text for a US-Norwegian company's navigational software application

BVS 8 is the latest version of StormGeo's globally successful *Bon Voyage System*, which puts voyage planning in the hands of the captain to enable the safest, most fuel-efficient route to be planned and maintained.

BVS 8 optimizes voyages and confirms navigational safety by integrating environmental and vessel data, providing the real-time data that both captains and onshore managers need to make quick, informed decisions.

BVS 8 supplies the captain with around-the-clock weather routing information and the communication channel for enhanced decision support by shore based operators. It's seakeeping module uses weather forecasts and ship design information to predict a vessel's seakeeping characteristics, enabling more comprehensive route planning and voyage optimization. With the option of motion sensor and anemometer integration, estimates can be made of the real-time sea state surrounding a vessel, which leads to quicker and more informed tactical decisions.

BVS 8 provides vessels with the latest available weather and ocean data using broadband or email communications in a highly compressed format to minimize communication costs. This data is then used to generate color-enhanced maps and graphics that enable the ship's captain to easily view and interpret potential problem areas in advance. BVS 8 also enables least time, fuel and/or cost to be calculated quickly, using the on-board computer.

4. Teaser text for used in a lunch & learn conference in the Netherlands

Flange joint leakage is a real tragedy – not just because it wastes untold amounts of money, threatens the environment and heightens the risk of explosions and damage to health – but because it is **entirely preventable!**

5. An extract from promotional text written for a new diving support vessel for Dutch company DUC Marine Group

The *MV Solution* will include two knuckle boom cranes – one mid-ship (90 Tm) and one on the aft deck (290 Tm). The vessel's main crane will include a ten-tonne active heave-compensated winch, as well as man-riding capacity of up to two tonnes.

Providing four-point mooring with CT-winch, combined with removable bulwarks and 250 m² of free deck space, *Solution* is ideal for diving, ROV-operations and small offshore construction works.

At *Solution's* stern, there is a six metre roller, with the option to install a 50 ton tugger winch. A 20 ton A-frame and two Ø1,20 m moon pools will also be included to facilitate survey work.

6. A slogan and text for an industry magazine advertisement promoting Dutch company's soil testing capabilities

80MPa drives SCPT to over 20 m

Fugro's digital Seismic Cone Penetration Testing technology for enhanced site characterisation can extend beyond 20m, even through gravel lenses. Using shear wave velocities and CPT profiling, we can assess liquefaction resistance and elasticity to ensure foundation design accounts for static and seismic settlement behaviour.

7. Newsletter editorial on unexploded bombs

In 2008, Fugro pioneered the four-sensor array, a highly efficient technique that has since become an established method for surveying large areas of seabed in a single vessel pass. Predominantly used for pre-construction surveys on wind farm sites, this method typically involves towing four individual marine magnetometers behind a vessel. Specially adapted winches, mounted to the deck of the vessel, control the altitude of the towfish, enabling them to 'fly' as close to the seabed as possible and detect anomalies with a higher degree of accuracy.

At RWE's Gwynt y Môr offshore wind farm in the Irish Sea, turbine foundations and 400-tonne steel structures already present on site meant that standard magnetometer survey techniques were unsuitable. Thanks to the company's advanced operational and processing techniques, it saw off fierce competition from two other companies to conduct UXO surveys at the site.

The solution was to deploy both a four-magnetometer towed array and a towed gradiometer array comprising two magnetometers attached to a non-ferrous metal frame, towed vertically through the water column. Fugro then applied its extensive knowledge of processing magnetometer and gradiometer data to produce exceptional results from the acquired dataset. This significantly reduced the 'masking' effect of the turbines' ferrous content, which was detected in the four-sensor array data.

The magnetic targets could be clearly discriminated within 20 metres of the steel structure, so Fugro mobilized a Seaeye Cougar-XT inspection class ROV to inspect those targets with significant associated risk. Deployed from an 80-metre DP2 vessel, the ROV was equipped with an Innovatum Smartsearch multi-sensor gradiometer array. Various targets were inspected and advanced processing techniques were adapted to meet site-specific requirements.

8. Extract from 'King's Guide' to Managing Pain (Medical copywriting)

Each time you move, the nerve endings of the large diameter nerves are stimulated to carry information from the skin, the muscles, the tendons, the joint capsules and ligaments to the spinal cord and on to the brain. This awareness of movement and position is called proprioception.

Apart from the movement of muscle creating the effect of proprioception, muscles are dynamic in the way that they respond to demand. An unused or under-used muscle will continue to reduce in bulk and power. This loss of bulk begins as quickly as twenty four hours after immobilization.

The skeleton, ligaments and tendons also rely upon mechanical stresses to maintain their strength. Putting off gently returning to activity not only allows your pain to continue unchanged, it will cause you to lose the strength that you have today. To prevent this from happening involves gently returning to movement and activity. This process is described in more detail in the section 'Formulating a Plan' (Page 32).

9. Technical review of alternative energy sources in northern Scotland

The potential of the Pentland Firth is far greater than was initially envisaged; academics at Edinburgh University now estimate that it could produce as much as 10-20 gigawatts (GW) of electricity - enough to power Scotland twice over at peak demand.

Not surprisingly, there's plenty of interest in developing what could be one of the largest energy developments on the planet. However, the Firth - which is actually a strait funneling water at up to 16 knots from the Atlantic to the North Sea twice a day - is up to 90 metres deep in parts. Vital feasibility and engineering studies would be considerable, and the deepwater installation of specialist energy devices and transmission infrastructures is relatively new and problematic. Factor in the required expansion of local port, transportation and accommodation facilities and it makes calculating the required investment in such a project extremely difficult.

10. Editorial extract for Norwegian satellite services provider

The new satellite correction service is the first to take advantage of all four GNSS (global navigation satellite systems); GPS, GLONASS, BeiDou and Galileo. GNSS augmentation services significantly improve position accuracy compared with unaided GNSS receivers, which are commonly used in the consumer sector.

By using all available GNSS satellites, the G4 service improves the availability and reliability of offshore positioning, enhancing the safety and productivity of a wide range of marine survey and other activities. It is particularly beneficial when the line-of-sight to certain satellites is obstructed by offshore structures – a key consideration during critical positioning operations. Transmitted via seven high-powered communication satellites, G4's augmentation signals provide at least two independent broadcast channels anywhere in the world, offering customers unrivalled coverage and peace of mind.

11. Script for video promoting a pipe inspection system

Guided Ultrasonic Limited's Wavemaker Pipe Screening System sets the standard for guided wave testing. It is now specified in many end-user guided wave inspection procedures.

The system uses low frequency guided ultrasonic waves to inspect tens of meters of pipe from a single remote location. The ability of this system to send waves along the length of the pipe means that very difficult to inspect areas, such as road crossings, can be interrogated from a remote and easily accessible location. The inspection can usually be performed while the pipe remains in service.

12. Extract from a datasheet about a hydrocarbon production tool

Centek's one-piece bow-spring design is proven to rapidly restore force when encountering constrictions in the wellbore. This allows the Screenguard to maintain full-bore centralisation and maximum standoff from the bore when traversing tight spots. It also protects against mechanical and abrasive damage to the sandscreen while running in hole. Sandscreens can be permanently damaged through contact with key seats, drilling rugosity, rocky ledges and tight spots. Isolation elastomers without centralising protection can be physically damaged or even displaced with enough contact force.

13. Script extracts from an internal video explaining new operating initiatives

'Advanced Life Extension' will involve new strategies, standards and operating procedures; updated management systems; and a revised change-management process. Old or obsolete systems and equipment will be upgraded, isolated or replaced, and new software and faster communication links will enhance collaborative working and efficiency.

Inspection, testing and maintenance programmes, together with audits, verifications, assurance and risk assessments, play a critical role in our successfully managing asset integrity and complying with legislation. But to make the journey from where we are now to where we want to be, we need everyone to be fully informed and included in the process.