



POWER & CONTROL SYSTEMS FOR OFFSHORE EQUIPMENT

mjr | Power & Automation



A SINGLE SYSTEMS INTEGRATOR

Reduce cost, complexity and risk resulting from long and inefficient supply chains by using a single specialist marine & offshore systems integrator, MJR Power & Automation.

With over 20 years' experience designing and building offshore equipment and systems, MJR provides OEMs with a single source of systems integration, from concept to completion. Including FEED, consultancy, conceptual design, detailed design, electrical, instrument & control panel design, PLC & SCADA software design, system construction, packaging, installation, commissioning and through life support.



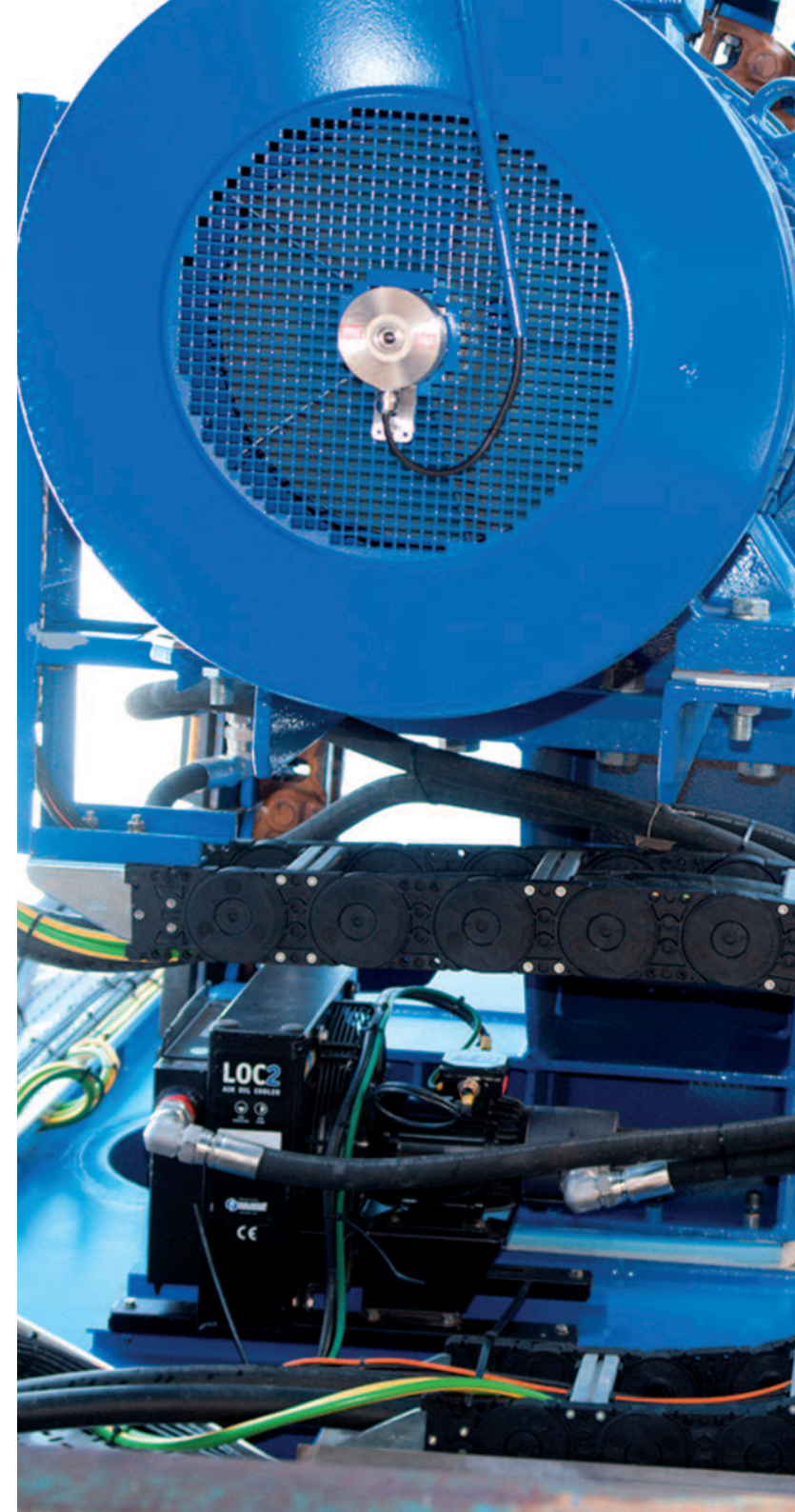
GLOBAL EXPERTISE

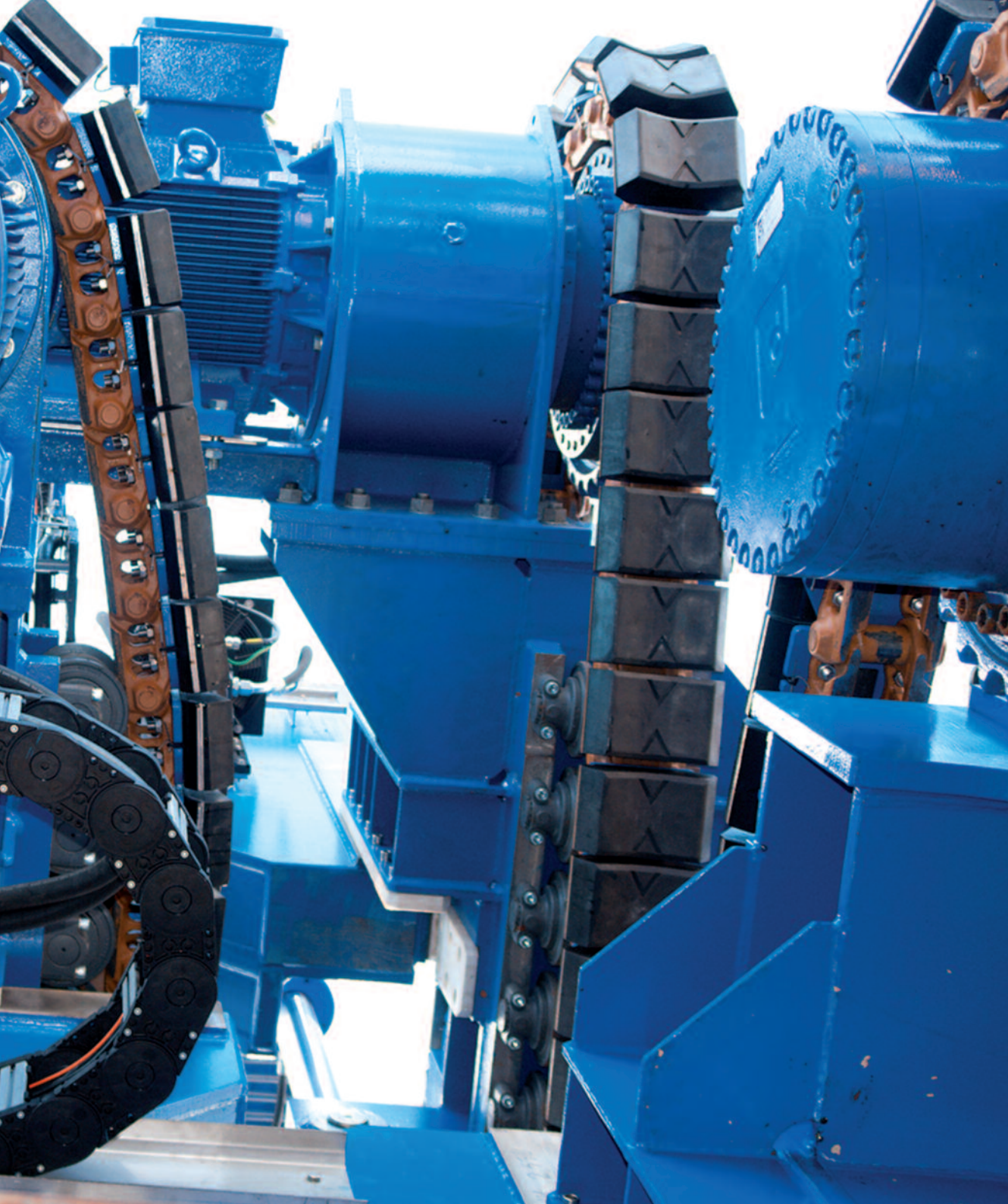
MJR has worked directly with most of the world's leading Tier 1 EPIC Oil & Gas Contractors and their equipment suppliers to deliver successful construction and subsea assets for many projects around the world.



COMPREHENSIVE SERVICE

Focussing specifically on the Marine & Offshore sector, MJR's integrated and specialist range of electrical power & automation services provides equipment manufacturers with a truly turnkey engineered solution.





OFFERING A COMPLETE SOLUTION

Specializing in integrated power systems, large variable speed drives and PLC/SCADA control systems, MJR has delivered power & control solutions for most types of Offshore Equipment. These include: Tensioners, Carousels, Reel Drive Systems, Winches, Jacking & Skidding Systems, all electric subsea vehicles (ROVs & Trenchers), ROV & Plough LARS, Subsea Construction Cranes, Multipurpose Handling Systems for IMR Operations, Cable Lay Equipment & Diving Systems.

Supported by a range of in house developed solutions including our advanced X-WAVE™ modular Active Heave Compensation System, we can engineer and build complete products for all types of offshore equipment.

Whether fixed, portable, modular or 'on skid' we can offer flexible packaging options for any application or environment with a strong reference list of delivery of DnV 2.7-2 compliant Containerised Portable Offshore Equipment Packages, Hydraulic Power Units (HPUs), Electrical Power Units (EPUs), Variable Speed Drive (VSD) Packages and Control Rooms.

SOLVING COMPLEX PROBLEMS

The design of Offshore Equipment and Handling Systems is subject to significant constraints and limiting factors which are particularly onerous for portable and temporary equipment. Safety, cost, size, weight, performance, modularity and aggressive dynamic and environmental factors all introduce significant and competing design challenges that can be difficult to resolve.

Managing these conflicting aims, whilst keeping equipment simple, robust, easy to operate and maintain is in itself a complex process and requires experience.



Pictured:
Conduit Protection System
(CPS) handling equipment
for installation of 'Piggyback'
Direct Electrical Heating
(DEH) cable



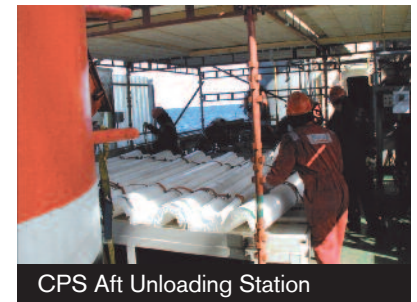
DEH 'Piggyback' Cable Spooling



Ramp Jacking & CPS Sys. Trials



CPS Storage & Transport Loading



CPS Aft Unloading Station

WITH EFFICIENT DESIGN

Costs of failure offshore are extremely high and whilst adopting the latest and exotic technologies can bring significant benefits in terms of reductions in cost, size, weight and power consumption an eye should also be kept on problems of early adoption. Avoiding 'first of a kind' solutions by using field proven established equipment and methodologies that offshore personnel are familiar with is key to managing risk and ensuring that equipment is reliable, maintainable and that spare parts are readily available.

MJR Power & Automation has a strong track record of delivering this type of cost effective, robust solution that simplifies equipment operation and maintenance and we have a reference list to match.



CPS Element Assembly Station



Pipe & CPS Banding



Pipe & DEH CPS Firing Line



Splash Zone

TO THE HIGHEST LEVELS OF SAFETY

For safety critical applications, extensive design experience with the latest hot swap redundant PLCs, Safety PLCs & I/O devices together with resilient control networks enables MJR to deliver systems with the highest levels of safety, integrity, availability and redundancy.

MEETING INTERNATIONAL STANDARDS

With an implicit understanding of internationally recognised 'Functional Safety' standards such as IEC65108 and Offshore/Marine Standards such as DnV-OS-A101 and DnV-OS-D202, there is no safer or more reliable marine and offshore automation partner.





PROVIDING DEPENDABLE THROUGH LIFE SUPPORT



Continuous availability of mission critical back deck equipment is key to offshore project success. Our after sales, technical support and service team is available round the clock to assist you with any spares, technical advice and service required to keep your equipment running safely and reliably. With over 25 years' experience providing worldwide service for marine electrical power systems, automation and electronics we understand that easy to access, responsive and expert service is essential.

Our service engineers are fully trained for offshore work and hold BOSIET (Basic Offshore Safety Induction & Emergency Training) certificates and medicals, enabling us to provide service for all types of Offshore Vessels and Mobile Offshore Drilling Units.



FROM CONCEPT TO MOBILISATION

Designing and building equipment is only a part of the service we offer. Our highly skilled, multi-disciplined installation and mobilisation team is available for deployment worldwide and has a strong track record of mobilising all types of offshore and back deck equipment. From small portable cable lay and trenching spreads, to the largest integrated rigid pipelay systems with over 2000 Tonnes of equipment, we have mobilised and commissioned virtually every type of offshore construction equipment imaginable.

Our marine electrical power and automation engineering background also gives us a unique advantage when it comes to integrating back deck equipment with the vessel. We understand the practical issues to consider when taking significant amounts of electrical power from the vessel to supply back deck equipment. From potential detrimental influence on critical vessel systems such as DP and vessel operability, to the more complex issues such as power quality (harmonics), EMC/RFI, system fault levels, resonance and regenerated power, we can assist with development and engineering of a robust and compliant integration philosophy.





CASE STUDY

PROJECT

60Te Multi-Purpose Handling System (MPHS) for Subsea Inspection, Maintenance & Repair (IMR) / Well Intervention. Comprising 3 off 8Te Guide Wire Winches, 1 of 15Te Cursor Winch and 1 off 60Te Main Lift Winch all with Constant Tension and Active Heave Compensation complete with integrated Tool/Module Skidding & Transfer System.

CLIENT

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CONSTRAINTS & CHALLENGES

Fast delivery, construction commencing before design freeze with multiple design changes, significant performance constraints.

DESIGN FEATURES

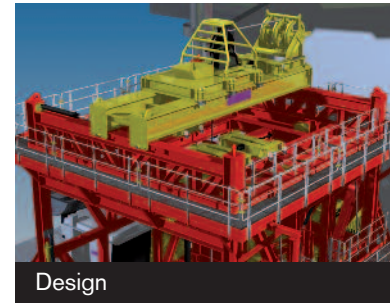
Control architecture based on Siemens S7 series PLC with WinCC SCADA, custom designed control cabin with active 'drillers' style chain with integrated controls.

CONSTRUCTION

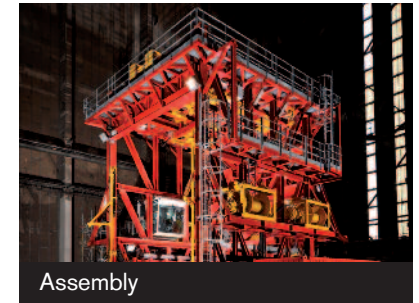
With 7 day working, the system was built, FAted and delivered in 16 calendar weeks. All construction was in house as MJR does not subcontract critical activities such as hardware and software design, construction and commissioning.



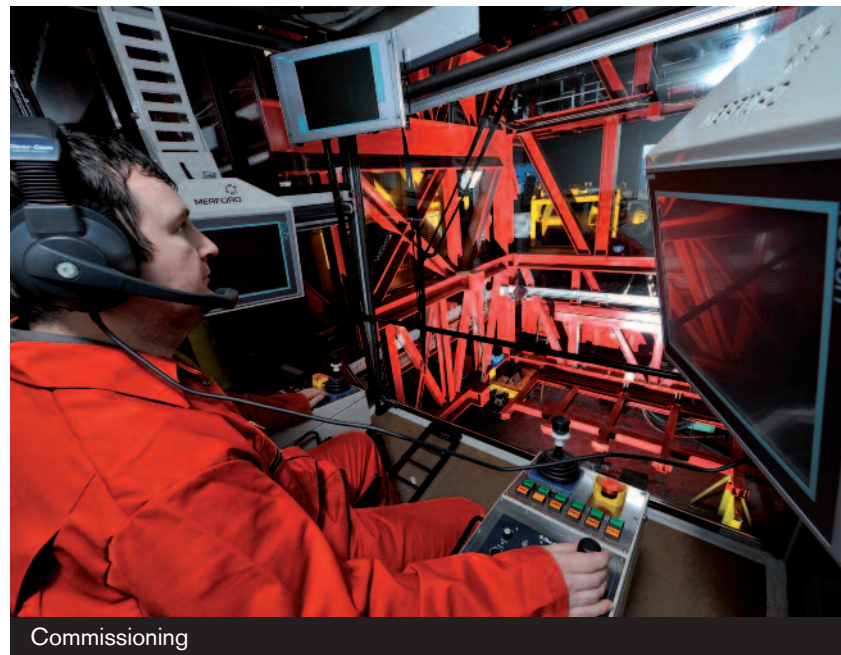
Concept



Design



Assembly



Commissioning



Operator Controls



Testing & FAT

INSTALLATION & COMMISSIONING

Using our in house installation and commissioning team including installation electricians, technicians and software engineers, we carried out the full electrical installation and commissioning at the client facility. This was followed by mobilization onto the vessel and SAT/ offshore trials.

A FORMULA FOR EQUIPMENT SUCCESS



FLEXIBILITY

Experienced and comfortable with absorbing frequent design change, we understand that rapid design evolution is often a feature of marine and offshore projects.



TRACK RECORD

Working for some of the largest and well known names in the industry, we are trusted to have the knowledge and experience to deliver on time, right first time, every time.



IN HOUSE

All critical activities such as hardware and software design, construction, testing and commissioning are carried out by our in house team. We do not subcontract mission critical tasks.



THROUGH LIFE SUPPORT

With an experienced offshore technical service and after sales team, our support continues well after the system has left the quayside.



FAST DELIVERY

Set up for 24/7 working, if required, in order to meet ambitious delivery schedules.



APPROVAL

We work to Marine Classification Society Rules (DnV, Lloyds Register, BV, ABS etc) and have years of experience of gaining any necessary and associated approvals and working with class surveyors and approvals departments.

CONTACT



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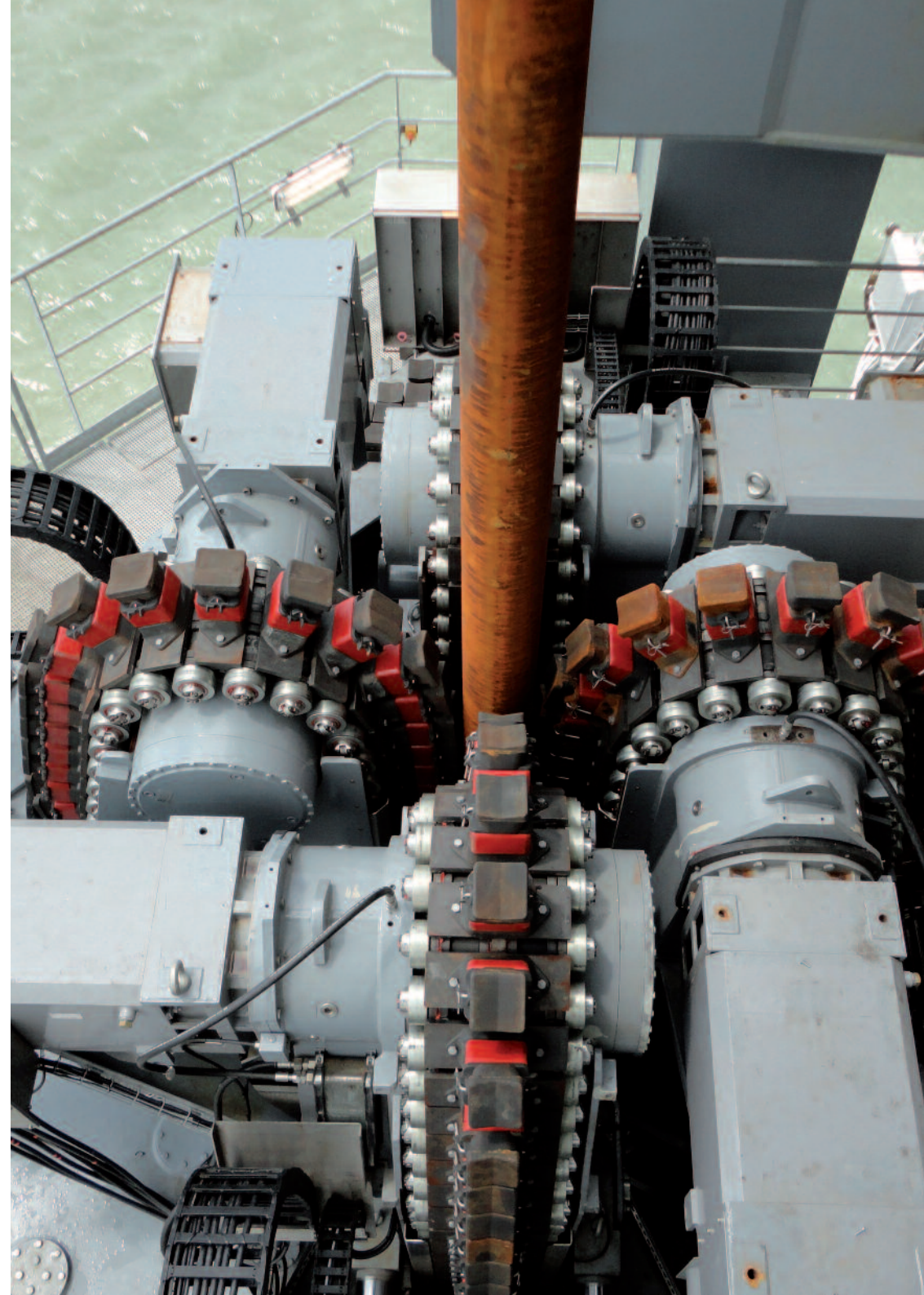


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