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COSMO ENERGY HOLDINGS CO., LTD.

Cosmo Oil Co., Ltd.

Yokogawa Electric Corporation

Cosmo Oil and Yokogawa Start Exploring Possibilities for Refinery Digitalization

~Aiming for More Reliable and Efficient Refineries~

Cosmo Oil Co., Ltd. (“Cosmo Oil”) and Yokogawa Electric Corporation (“Yokogawa Electric”) are pleased to announce that Cosmo Oil and the Yokogawa Electric subsidiaries Yokogawa Solution Service Corporation (“Yokogawa Solution Service”) and Yokogawa Digital Corporation (“Yokogawa Digital”) have joined forces to promote the digitalization of operations at refineries owned by Cosmo Oil.

With a view to having robots perform plant inspections and maintenance in the future, Cosmo Oil and Yokogawa are conducting a proof-of concept test using a quadruped walking robot at Cosmo Oil's Yokkaichi Refinery. In addition to conducting a performance assessment of the quadruped robot in a temporarily closed plant facility at the same oil refinery, the two parties are identifying challenges for on-site application and selecting points that need to be verified in preparation for on-site use of the robot. Going forward, the companies will accelerate digitalization at refineries through the realization of robot-driven inspection and maintenance, and other such initiatives.



<Photo of the quadruped walking robot proof-of concept test>

Additionally, as part of these refinery digitalization efforts, workshops on the use of digital tools have been held at the Chiba Refinery from November to improve the sophistication and efficiency of refinery operations.



<Cosmo Oil Chiba Refinery>

In the future, the companies will explore the potential introduction of robotics (robots and drones) and use of digital tools, and will work toward the realization of “refineries where humans, robots, and AI can work together” at Cosmo Oil’s Chiba, Yokkaichi, and Sakai refineries.

Having adopted “Oil & New ~Next Stage~” as the slogan for its Seventh Consolidated Medium-Term Management Plan, the Cosmo Energy Group aims to strengthen its competitiveness through safe and stable operations and improved profitability in its oil-related businesses. At the same time, it has positioned DX as the principal driver among three management foundation transformation pillars – human resource transformation (HRX), digital transformation (DX), and green transformation (GX) – and is undertaking business model transformation through digital capabilities and change management. In strengthening the competitiveness of its oil businesses, the Cosmo Energy Group aims to offer value in new ways while transforming its conventional business model through the use of digital technology. To achieve this end, the Group as a whole will further accelerate its DX promotion efforts by building data utilization infrastructure, pursuing data-driven management, proactively collaborating with various partners (as is the case this time), creating diverse organizations, and fostering a global mindset.

Yokogawa Solution Service and Yokogawa Digital provide comprehensive consulting services as well as system installation, operation, and maintenance services for corporate planning, information systems, and manufacturing divisions to help customers improve their operations. Established on July 1, 2022, Yokogawa Digital is stepping up its efforts to develop DX solutions and technologies. In the process industries, which require a high level of safety and the complex control of temperature, pressure, and flow, Yokogawa draws on its consultants with extensive domain knowledge and experience and leverages its simulation and other advanced digital tools to support the development of viable strategies and incorporate them into operations. In this way, Yokogawa will work together with Cosmo Oil to assist in the digitalization of operations at its refineries.

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