

TMP news

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Termomeccanica Pompe acquires a 50 million contract in the Oil&Gas sector

Termomeccanica Pompe (TMP) has recently acquired a contract for the supply of pumps to one of the major oil-extraction pumping plants in the Middle East, at the Zubair oilfield situated near the city of Basrah in Iraq.

This supply is worth about 50 million euros, with an additional 5 million for a "Long-Term Maintenance Service Agreement" for the system over a period of 5 years.

The plants will be implemented by a consortium headed by Eni S.p.A.; the other partners are Occidental Petroleum Corporation, Korea Gas Corporation and Missan Oil Company.

The machinery will be installed at three different sites, Hammar, Mishrif and Rafidya, almost inaccessible areas where environmental conditions are exceptionally severe. As a direct consequence, stringent design regulations are applied in order to ensure that the pumping systems are suitably reliable over time.

The latest production target is 1.2 million barrels of crude oil per day for the period up to 2035.

The technical counterparts of Termomeccanica will be 3 Korean companies. The contract will be developed under the strict supervision of the final user's consultants, namely, the South Oil Company, belonging to the Ministry of Oil in Iraq.

The contract involves the supply of pumping systems, the operation and monitoring of the stations that "inject" water into the oil wells to extract crude oil and a "Long-Term Maintenance Service Agreement", which will be implemented by the local branch.

24 units will be divided into 12 pumping units. Each one will have a main injection pump with a total capacity of 1,100 m³/h, a gauge pressure of 185 barg and an installed capacity of 8,700 kW as well as an auxiliary service "Booster" pump with a total capacity of 1,100 m³/h, a gauge pressure of 12 barg and an installed power of 500 kW.

The machinery is designed in compliance with API 610 (American Petroleum Standards), taking into account the most stringent static and dynamic sizing criteria for every single detail.

The pumps will be driven by electric motors with variable frequency, and a mains frequency converter and transformer in order to optimise production and related consumption depending on the various requirements of the plant over time.

The machinery will be monitored by electronic systems with cutting-edge technology grouped together in specific LERs (Local Electrical Rooms), one for each separate pumping unit in order to guarantee high quality standards over time and keep the most important hydrodynamic properties under control, including: temperature, pressure and vibration levels, parameters for assessing the correct operation of the pumping systems, even by remote control, minimising any chance of faults and related maintenance intervals.

It is therefore an important contract that rewards the company's investments in the Oil&Gas and strengthens our presence in the Middle East, where the company operates through its own local facilities not only to sale new products but also to provide after-sales service related to pumps already installed in the area.



Zubair Oil Field - Iraq

Termomeccanica seminar at DEWA on the technical foundations of centrifugal pumps

In the Gulf countries, the natural resources and utilities that allow exploitation are considered strategic assets for economic development and diversification. Consequently, governments adopt policies aimed at optimizing their potential.

More specifically, the utilities employed to produce water and energy in the Federation of the United Arab Emirates are involved in projects to improve the efficiency and reliability of the plants, in compliance with the most stringent international standards.

For example, Dubai Electricity & Water (DEWA), a governmental organisation that manages the water and energy production in the United Arab Emirates, with a generative capacity of 470 million gallons and 9,700 MW, aims to achieve excellence in managing the available assets.

In this context, DEWA is looking for strategic technological partners able to introduce technological solutions to solve critical issues related to managing its facilities.

Termomeccanica Pompe, singled out by DEWA for this purpose, was recently called upon to support the Management of the plant in Jebel Ali (Dubai) by holding a seminar with high technical content, focused on the main technical aspects involved in designing and operating centrifugal pumps.



The course, approved by Vice-President MMD Mr. Mohmoud Baniabassi, saw the participation of fifteen Senior Maintenance & Operations Managers from the different stations at the plant in Jebel Ali. The speaker at the seminar entitled "Centrifugal Pumps - Technical Educational Program" was Engineer Mario Coneri, who is in charge of the R&D department of TMP and has longstanding experience in rotating machinery and industrial plant engineering sector.

The topics covered mainly concerned the hydrodynamic physical properties that govern the operation of centrifugal pumps (such as capacity, head, performance, absorbed power, NPSH, specific speed, specific suction speed, volumetric loss and friction loss), the different types of characteristic curves derived from specific combinations of these properties, the laws of hydraulic similitude, cavitation phenomena, and radial and axial hydraulic forces.

Due to the interest shown by participants, in-depth examination was also given to the section that described the interaction between the characteristic curves of the pump and the characteristic curves of the plant (open or closed systems, pumps in series or parallel pumps, and adjustment systems). Implications were also analysed deriving from real system curves that are different from expected ones, namely, from system curves that have changed over time due to aging or blockage of pipes and equipment. In this respect, TMP highlighted the expertise of the technical staff of its Service Division in providing support for end users in order to inspect, using on-site measurements, whether the aforementioned situations exist at their plants and whether it may be advantageous, for the purpose of energy saving or increasing the MTBF (Mean Time Between Failures), to make changes to the hydraulic components of the pump or the materials used.

This seminar clearly illustrates how Termomeccanica Pompe has developed in recent years from a manufacturer of centrifugal pumps to a supplying partner, offering innovative customised solutions for the efficient and reliable management of its customers/end users' plants.

Supplier web portal: a step ahead in supply chain integration

Last May, Termomeccanica's Mechanical Business, headed by Termomeccanica Pompe, launched its Supplier Portal.

The tool, a web area dedicated to the suppliers of Termomeccanica Pompe and Termomeccanica Compressori which have adhered to the project, proposes itself as their main interface for order management and documentation exchange.

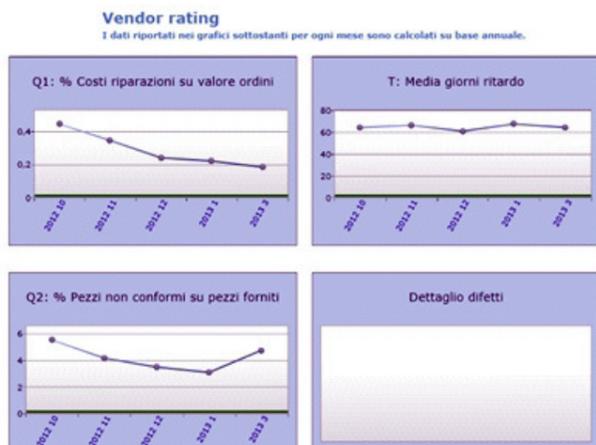
The Portal, accessible through the activation of personal access credentials, offers the supplier the following features:

- Access to performance indicators (Vendor Rating);
- Management of orders in progress: sending of confirmations and other transmittals, order revisions and document consultation;
- Proposals for order positions amendments related to quantity, price and delivery date (always subject to approval by Termomeccanica's buyers)
- Documentation management through the use of a dedicated area of the server

The tool is interfaced with Termomeccanica ERP system with which it exchanges data in real time; it also benefits from its e-mailing system to manage notifications to suppliers as well as to the Purchasing and Expediting Departments.

At the moment, the Portal is in its start-up phase with Italian suppliers.

The development plan of the Portal foresees, in addition to the introduction of new features related to the tracking of order materials, the extension to international suppliers with the objective to cover 100% of the regular suppliers base and the relative order volumes managed.



Portal vendor rating feature interface including graphs on repair costs, delays in delivery, non-conform materials and defects

TMP Service Sud and the "SMART AREA" project

In October 2012, a law was passed to govern clean-up operations in the Taranto area. The "Smart Area" project, strongly backed by Confindustria Mezzogiorno (Italian Manufacturers' Association for the south of Italy), then got underway. Its goal is environmental reclamation and the development of new technologies for eco-friendly firms. Law no. 171 of 4 October 2012 involves intervention measures amounting to 396.7 million euros of public funds, of which 283.7 million have already been made available for reclamation activities. Of these significant sums, about 60 million have been allocated to the "Smart Area" project, launched in February 2013. The "Smart Area" project is active in various fields, ranging from territorial development, urban planning and the energy-environment, social and economic-financial sectors, and aims at improving technologies in order to reduce

environmental impact. To facilitate territorial development, an Srl (limited liability company) was set up bearing the same name as the project, with a capital of 1 million 150 thousand euros, with the participation of 39 firms based in Taranto, who are members of Confindustria and active in the fields of metalworking and mechanical engineering, construction, environmental reclamation and plant engineering. The aim of the "Smart Area" consortium company, chaired by the President of Confindustria Taranto, is to be the operational arm of the "Smart Area" project and to apply for projects related to the green economy, thus becoming a point of reference for environmental improvement works in the Taranto area while making use of local experts and specialists. Its two goals for the future are to clean up the local area and to implement IEA (Integrated Environmental Authorisation) measures for the ILVA steel plant. For the IEA operations, agreements are being drawn up with banks to obtain a credit line of 500 million euros for the firms in the Consortium. In addition, a response is eagerly awaited with regard to financial support of 1 billion 800 thousand euros, provided that ILVA allocates the reconstruction work of the plants to local firms. In this scenario, TM.P. Termomeccanica Service Sud Srl has immediately joined the "Smart Area" consortium and taken its place among the major players (the top 5) in terms of technological content and capital involvement.

SMART AREA TARANTO Società Consortile a r.l.



New contract acquisition in Nigeria for TMP's Service Division

Last June, TMP's Service Division acquired a new contract for the supply of two fire-fighting pumps complete of electric motor for the Ekpan plant, owned by WRPC (Warri Refinery Petrochemical Company).

The delivery of the first pump is planned for December 2013 while the second pump is to be delivered in March 2014.

The collaboration with Milat Nigeria Ltd., represented by its Managing Director, Mr. Obi Okereke, has to be highlighted: Milat Nigeria has been offering precious support to TMP with its local activities and will continue to do so in the future.

The contract has been signed with NNPC (Nigerian National Petroleum Corporation), owner of the following refineries:

- Warri Refinery and Petrochemical Co. Limited (WRPC)
- Kaduna Refinery and Petrochemical Co. Limited (KRPC)
- Port Harcourt Refining Co. Limited (PHRC)



From left to right: Paolo Bandoni (Sales & Marketing Manager –TMP Service Division), Emiliano Maianti (TMC Managing Director) and Obi Okereke (Managing Director of Milat Nigeria)

Flash News

New ATEX Series for TMC Screw Compressors Product Line

As a key part of its strategy of expansion in the Petrochemical and Oil & Gas markets, Termomeccanica Compressori has developed and made available in its product portfolio a full range of compressors built to meet the ATEX directive.

In order to compete in these markets, all the components of the compressors have been built to meet the requirements for potential explosive atmosphere, as specified in the ATEX 94/9/CE directive.

TMC is thus able to provide solutions for air and gas compression, which can be used in very demanding environments and are able to work in both the internal and external areas of the Classified zones 1 and 2.

It is important to highlight that TMC was able to meet this challenge thanks to Bureau Veritas that, as notified body, fully certified the whole process and guaranteed the reliability of the project.

This new range of solutions has already been fully appreciated by most of the customers, which keep choosing TMC as their international partner synonymous of performance and quality.

A.R.D.E. Project – Searching for Excellence - Year 2013

The five Competence Teams continue their activities and it is possible to consult the projects in which they have been and are still involved as well as their related materials in the Training section of the company's Intranet.

The various projects defined at the beginning of the year are involving the teams on many fronts.

The *Responsibility Team* is working on a form related to the closing of jobs; the *Predicting and Resolving Problems Team* has opened new discussions on technical topics on the Blog which it has activated; the *Teamwork Team* is about to officially start its "in a colleague's shoes for a day" project and is implementing the restyling of the company's Intranet phonebook; the *Initiative Team* is creating and implementing the product photo library to be integrated to the Sales Department's existing Reference Program; the *Focus on Company's Objectives Team* is making its new film on jobsites and is reviewing its questionnaire on internal Customer Satisfaction.

A monitoring meeting involving all the competence teams will take place in November so as to define all the activities completion dates.

The editors of this issue are:

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Our mission

To contribute to the success of our customers through our experience and know-how. We pursue this goal giving the utmost consideration to the hard work and commitment of both employees and suppliers, respecting the Environment and complying with the expectations of our Shareholders.