

# TMPnews

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## Latest developments in the Oil & Gas market

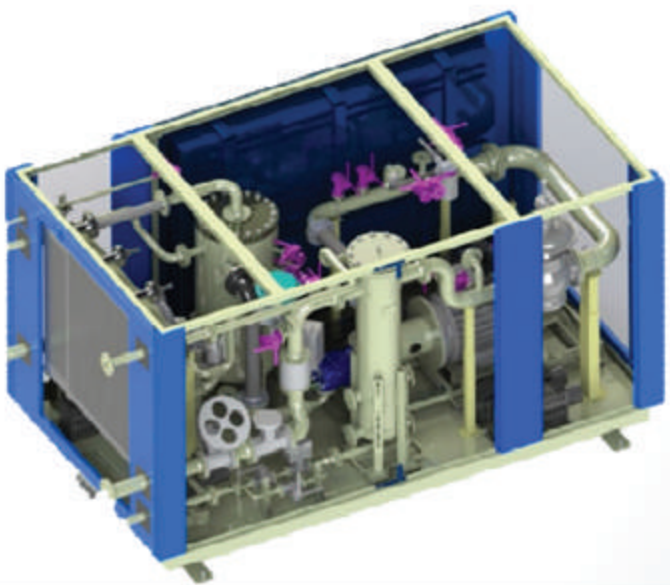
### Adicomp – the integration with the Termomeccanica world facilitates the company's entrance in the Oil & Gas market

Adicomp S.r.l., Sovizzo (Vicenza-Italy), is a company specialized in air and gas compression and treatment systems supplying flexible and innovative solutions that respond to the demands of a vast customer base in various market sectors. The company, long-standing customer of Termomeccanica from which it purchases the screw compressors it uses for its packages, officially became part of the Termomeccanica group in September 2013.

The integration and synergy with Termomeccanica have gradually grown over the last two years, with particular intensification over the last 6 months, that is to say since the Termomeccanica Group's decision to develop the Oil & Gas market for air and gas compression packages through Adicomp.

The company has created a dedicated business unit with high-profile technical and commercial personnel to handle this new market, unit which has benefitted from Termomeccanica's commercial & after-sales service networks as well as sector-specific know-how.

As a result, today one can say that Adicomp has become a player to reckon with in the highly complex and technological Oil & Gas market.



Gas pipeline injection compressor view

And the contracts acquired during the first semester of the year prove it. Particularly worth mentioning, the order signed with the Romanian customer named IRCAT, key player in the heavy industry equipment, portable power and air & gas compression sectors of the country. Such contract regards the supply of two 75kW compressors for gas pipeline injection service for the EPC contractor Petrom (OMV Group), one of the largest producers of integrated oil & gas in South-East Europe.

Another important order to highlight is the one placed by Airpack, a long-date Dutch customer and

an important figure in the Oil & Gas field, who turned to Adicomp to develop a customized oil free package, with double stage screw compressor, which would respond to its specific demands.

The synergy with Termomeccanica has also been highly valuable for the design of this package, the first oil free type for the company.

With this innovative additional product, Adicomp will further consolidate its position in the Oil & Gas market, a market characterized by a strong demand for oil free compressors.

Another sector in which the company holds a leading position at European level is Biogas. Two recent orders, destined to biogas upgrading, speak for themselves: the one placed by the French customer Air Liquide for the design and manufacturing of the BVG 450 model, up to now the largest compressor package ever ordered to Adicomp for this type of application and the other one placed by the Dutch company DMT, a long-standing customer, who has equipped three of its plants of the sector with customized Adicomp compressors.

### On-site job for TMP at GNL ITALIA's Panigaglia regasification terminal



View of the Panigaglia plant – gulf of La Spezia

As a regasification terminal, the GNL ITALIA Panigaglia plant, located at Fezzano di Portovenere in the La Spezia province, is the final destination of LNG carriers. This is where liquefied gas (at a temperature of approximately  $-160^{\circ}\text{C}$ ) is returned to its gaseous state and fed into transmission and distribution grids. Termomeccanica Pompe acquired in April 2014 a contract of approximately 900,000.00 euro for mechanical, civil and electrical instrumentation works related to the "engineering services and design of the substitution of the cryogenic pumps of the P101 and P104 plants" project to be performed at the above-mentioned terminal.



On-site pump installation by TMP

More specifically, the job consists of the turnkey supply of the new tubing, electrical plant and instrumentation connections of the new cryogenic pumps with submerged motor, replacing the existing ones which date back from the early 1970s. The works also include the civil works related to the adaptation of the existing basement and final drying of the new piping before start-up.

The opening of the job site, initially planned for June 2014, was postponed to 2015 following the Russia-Ukraine conflict, which broke out last summer and made the Panigaglia terminal become "strategic".

In June 2015, the customer, GNL ITALIA, delivered the terminal "gas free", i.e. cleared and safe, allowing Termomeccanica Pompe to start its job.

TMP is now concluding its works and the customer's plant pre-commissioning with successive start-up are planned for the end of September 2015.

### TMP supplies boiler feed water pumps for a Duslo petrochemical plant in Slovakia

The Italian branch of the French giant Technip, amongst the major international players in petrochemical engineering, was awarded a substantial EPC contract by the Slovakian chemical company Duslo for the turnkey supply of a new ammonia production unit in the existing fertilizer complex located in Sal'a, in the South of the Slovak Republic. The unit, benefiting from state of the art technology, will have a production capacity of 1,600 tons per day of ammonia.



Petrochemical plant – ammonia production plant

Termomeccanica Pompe will be supplying the boiler feed water pumps for such unit. More specifically, the contract with Technip Italy includes the supply of n.2 API BB5-type pumps with double suction first impeller to be delivered by August 2016.

It must be stressed that it is the first supply Termomeccanica Pompe will be making on Slovakian territory.



## E-Procurement 2.0: RFQ form on TMP's supplier portal

Termomeccanica Pompe activated a few months ago the module dedicated to the management of suppliers offers process on its E-Procurement portal.

The section of the portal, called RFQ (Request for Quotation) module shall be accessible to all the suppliers who will be activated for the use of the tool and shall represent the only interface for the management of their offers and for the exchange of the related correspondence.

Through the portal, which is interfaced with Termomeccanica's ERP system, the supplier shall:

- access all the information and documentation supporting the active requests for quotation to which they have been invited;
- be informed on possible modifications to the documentation supporting their request for quotation through e-mail notification;
- control the status of the requests for quotation, particular attention being given to the terms related to the presentation of such offers;
- submit their own technical and commercial conditions, inputting data and documents in the FTP area dedicated to the management of their offer.

The tool, using the e-mail engine of the ERP system, shall handle all the necessary exchange of notifications between the supplier and the TMP buyer correlated to the management of the process. At the moment, only a few suppliers, selected amongst the users of the portal for the management of purchase orders, have been activated to use the RFQ module but the objective is to quickly activate the entire population of such users and to extend the use of the module to the entire supplier base of Termomeccanica Pompe.

The E-procurement tool shall grow according to the number of users involved, to the volume of transactions and documentation, and in the next few months also according to the types of processes managed. Important developments related to supplier qualification and order tracking are under way to further the supply chain integration, therefore stay tuned!



## Termomeccanica Pompe presents a technical paper at the MARINE 2015 conference

The biennial MARINE conference series is organized within the framework of the Thematic Conferences of the European Community on Computational Methods in Applied Sciences (ECCOMAS) and is also a Special Interest Conference of the International Association for Computational Mechanics (IACM).

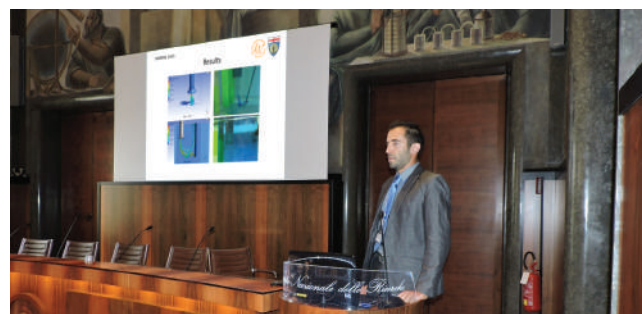
MARINE 2015, held last June in Rome at the Consiglio Nazionale delle Ricerche (CNR) is the Sixth International Conference on Computational Methods in Marine Engineering and marked the first decade of this conference series.

As the organizers remarked, "the conference goal is to make a step forward in the formulation and computational solution of marine engineering problems accounting for all the complex couplings involved in the physical description of the problems".

More specifically, the conference on "marine engineering" covered not only applications within the maritime and offshore industries but also scientific and engineering challenges related to the marine environment.

Termomeccanica Pompe's R&D Department took part to the conference, publishing and presenting a full-length paper titled "the application of CFD to vortical flow structures detection in sea water pumping stations". Such paper presents the company's intense simulation/experimental campaign aimed at understanding the capability of a general purpose CFD code to predict the vortical structure in a pump sump intake with sufficient reliability to be integrated in the design process.

This work is actually part of a research project carried out in partnership with the University of Genoa, which has resulted in new simulation tools and procedures for Termomeccanica Pompe's R&D Department and has also led to international publications.



Alessandro Gattorochieri, R&D Dept., presents TMP's article at Marine 2015

## TMP launches its new Improved Termomeccanica Air-end series

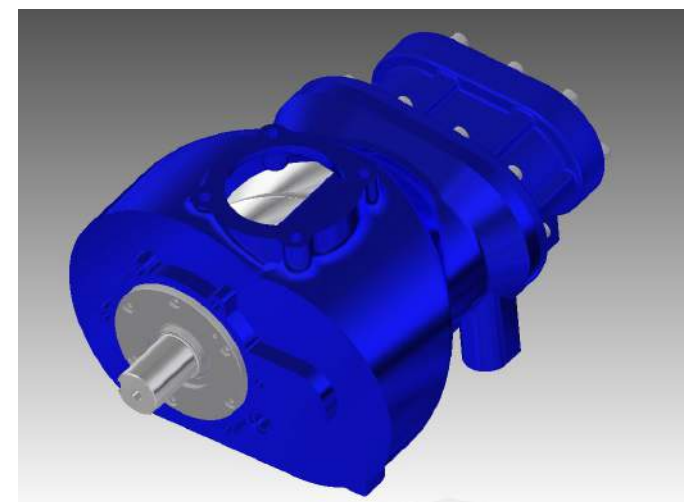
Termomeccanica Pompe is launching a completely new range of bare-shaft screw compressors fully dedicated to air applications.

The 100% made in Italy range, named ITA Series (Improved Termomeccanica Air-end), is actually an evolution of the existing SCA Series which is geared towards improved performances and energy saving. The number of lobes in the male and female rotors is the same as in the SCA Series, but a new profile has been studied & customized for the air field and offers its best performances centered on 8 and 10 barg.

This is actually the first screw machine series entirely developed in-house by Termomeccanica. All its technical characteristics, such as diameters and lengths, have been chosen after a comparative analysis between different configurations so as to better match the market requirements related to performance.

As far as general design is concerned, the new air-end compressors are compact and silent and are studied to reach the requested performances in the market with a lower speed than the SCA Series, thus granting the final customer more reliability and a longer life cycle.

The first newborn of the ITA family, the ITA18 model, available in both direct and gear versions, covers from 45 kW up to 90 kW and has already undergone factory testing, including the endurance test of the sealing system thanks to installation on a package especially adapted for this purpose.



ITA18 model, direct version

The preliminary performance calculation on the ITA18 has been implemented thanks to a software purchased by the company in order to become independent in the profile generation process. The software is indeed a valid tool for the design process, which allows to apply a semi-empirical – quasi-one dimensional method to the geometrical, thermodynamic and dynamic analysis of screw compressors.

Such analysis is a relatively fast procedure, which can be very useful in the evaluation of the global performance parameters, such as delivery and specific power.

TMP will shortly start delivering the first ITA 18 prototypes to its customers, who, based on the data book they have received, have already issued a positive evaluation on both the technical data and general configuration of the new air-end compressor.

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.

**We think outside the box for you**

Chose a unique partner for your unique needs

