TECHNO *News*

ELECTROMECHANICAL ASSEMBLY

Works at TKCSA vouch Niplan competence in the industrial assembly market

At ThyssenKrupp CSA Siderúrgica do Atlântico (TKCSA)'s industrial site, the 5.7 million sinter production capacity sinterization plant is already at the Commissioning and Start Up phase.

"The differential in Outotec - TKCSA agreement for the electromechanical assembly of the Sinterization plant compared to others Niplan carried out, was the complexity and dimension of the works where the management of the entire company activity involved highly and long-time skilled professionals in the executions of undertakings of this size, with over 20,000 ton equipment, structure and piping, among others.

Still at TKCSA, Niplan faces another big challenge, namely the electromechanical assembly of Alstom's 490 megawatt thermal-electric, demanding from all involved their maximum commitment and technical competence along a quite challenging term, expecting to conclude the works on March 2010.

In these 2 (two) projects, we understand that Niplan's contribution to the economical and social development in Brazil is led by two main points: the plain use of the acknowledgment and technology so to have a quality national engineering, and the promotion of Brazilian labor.

We would like to thank all employees that have contributed to Niplan's continuous success in highly complex undertakings like this one, being certain that we are contributing to the promissory future of our country.

Massahiro Tokuzato, Niplan's Director of Operations

The electromechanical assembly of TKCSA sinterization unit, contracted by Outotec Tecnologia/TKCSA, was executed by Niplan that brought to this undertaking the experience it has accumulated along two decades operating in industrial works in metallurgical, chemical, petrochemical, oil & gas, mining, among others, segments.

Niplan works at Outotec/TKCSA started on December 2007 and have demanded 18 months until the delivery of the unit. Because it is large, heavy vertical work, the execution required the use of high lifting capacity cranes and a large quantity of scaffolds. On the other side, the adjustment of certain equipment, such as the electrostatic precipitator, just to name one, demanded a quite fine level, i.e. a void margin to make mistakes of any nature.

"In this job, the high accuracy level requested in service steps, such as topography, weld and connection execution, spare part lifting, plate alignment, among others, was of utmost significance for the component assembly and verticalization to be definitively and properly carried out", explains Engineer Marcelo Guimarães, Niplan's Agreement manager.

Sinterization is the metallurgic unit where sinter is manufactured, resulting from an iron ore gathering (fine) using lime and coke fines. After prepared, those raw materials are loaded into the furnace. The sinterization plant has though, two ends: one for the raw material entry and

one for sinter exit. The unit main point is the rotational equipment, "a sinterization heart", whose detailing level is quite high before the technology involved in the material transportation and preparation which even goes through a heating process.

A large volume of major equipment from the unit was supplied separately and arrived at the works inside containers. The preparation of these components to be assembled demanded a detailed planning, a strict material control and a wide logistics, allowing Niplan to execute the works within the expected terms with the quality the undertaking required.

Along the work peak period, the company counted on a 1200 individual labor contingent at the construction site; 80% of those professionals were hired from the surroundings and the remaining 20% from the states of São Paulo, Espírito Santo and Minas Gerais. "Niplan's experience in other metallurgic projects was grounding from the success of the job. The acknowledgment the teams brought to the company, both at the field and in planning, plus the contractor's support in the project details, have contributed to the very positive final outcome", evaluates Marcelo Guimarães.

New challenge in the thermal-electric plant assembly

At ThyssenKrupp CSA metallurgic site, besides the sinterization, Niplan was chosen in an auction carried out by Alstom to execute the electromechanical assembly of the thermal-electric, 490 MW capacity combined cycle plant.

On may of this year, when Niplan has started to plan its services in this undertaking, the works were paralyzed and we replaced the company, because the delivery term was settled by March 2010, the plant assembly continuity involving mechanics, piping, electrical and maintenance, started right in June, what required from Niplan, agility to follow up both processes and procedures of all services.

In this work the technological differential is the use of different systems and disciplines, demanding a quite precise level of knowledge of the electromechanical assembly; therefore Niplan's engineer teams are numerous and qualified to support and follow each system assembly up. Furthermore, high pressure, temperature, and steam use requests, related to the project demand double attention in the equipment and steel alloy high-pressure piping using very specific welding processes.

Either in this one, or in other works Niplan executed, the application of rigid industrial safety standards aiming to the employees health and integrity allow the company to meet its "zero accident" goal, established in the undertakings it executes.