



CDE do Brasil provides Camargo Correa with sand washing edge in Venezuela

When the Brazilian conglomerate Camargo Corrêa began looking for a solution to process its own quality sand and aggregates for a number of infrastructure projects in Venezuela and Brazil, it turned to CDE do Brasil to provide the required solution.

Latin-America is a strengthening economy with a buoyant construction programme, boosted by preparations for the 2014 World Cup and the 2016 Olympic Games. New infrastructure projects currently underway include the construction of 5000 km of highways in Brazil as well as major seaports, airports, railways and river ways initiatives. Venezuela is also embarking on various ambitious housing projects that will see over 50,000 high rise residences built each year. And all this output is calling for materials, equipment, and manpower.

Camargo Corrêa is one of the largest privately owned businesses in Brazil, working in specialized areas of construction, infrastructure, industrial applications, manufacturing, and management of brands. Camargo Corrêa is also one of the leading integrated construction companies in Latin America as well as the second largest producer of cement in South America with activities in Brazil, Argentina and Venezuela, and a global exporter dealing with many of the world economies.

The requirement Camargo Corrêa had was simple – on a new quarry site outside Caracas, Venezuela, Camargo Corrêa wished to dredge the sand and aggregates from a local river bed and use this

material to produce concrete. Stefan Hunger, the Country Manager in the San Paulo office believed that CDE do Brasil could significantly enhance the ability of Camargo Corrêa to deliver the highest quality materials to the many infrastructure projects that the business was involved with, whilst improving efficiency and productivity. Following initial meetings CDE do Brasil was able to demonstrate its technical ability in designing and manufacturing mobile and static washing and recycling equipment for the quarry and mining industry and presenting a realistic proposal for this project.

CDE do Brasil quickly concluded that a good quality sand and aggregate resource could be achieved by taking the 0-150mm material and washing it through the M2500 E3™ returning the aggregate material to the screening and crushing plant for further sizing while producing a 0-5mm washed sand product. As with all projects, the client's requirement was crucially important to the overall specification and this resulted in an extremely detailed dialogue from the onset.

Stefan Hunger of CDE do Brasil explains the suitability of the products specified for the Camargo

Corrêa project. "CDE has a unique portfolio of products, with each installation being different and having its own unique specification. In the case of Camargo Corrêa we were able to provide a solution tailored specifically for this project that no other manufacturer globally could provide.

In specifying the most suitable components for this Camargo Corrêa project, CDE do Brasil recommended it should feature the CDE M2500 E3™ mobile washing plant as the core equipment for this installation. A highly versatile solution the M2500 E3™ is capable of processing a wide range of materials including sand and gravel, crushed rock and crusher dust, scalplings; iron and mineral ores, as well as construction and demolition waste material.

The overall mobility of the plant was another important consideration as Camargo Corrêa had other upcoming projects in the region where the equipment may be relocated at a later date. Being highly transportable the M2500 E3™ offers the operator the ability to wash, feed and screen sand and fine aggregates from one machine on a compact chassis anywhere, regardless of geographical location or terrain type. While the M2500 E3™ may be installed on a prepared concrete foundation or substructure, it is equally happy operating on the bare ground of a quarry floor. This flexibility means that the M2500 E3™ can be quickly installed and be operating, then be dismantled and transported to a new location, again quickly and with relative ease. In this instance, the manufacturer of the Camargo Corrêa plant was completed in the UK in approximately 12 weeks. Conservatively for a project of this size, installation and commissioning would take approximately two weeks to complete once all infrastructure and site services were completed.

The M2500 E3™ offers a space effective solution for aggregate washing and is suitable for quarrying, recycling and mining operations. In this case the 0-150mm material being fed directly to the M2500 via dumper through a specially constructed ramp resulted in the 5-150mm washed material then being delivered to the crusher for sizing into the required aggregate grades. The -5mm material was sent to the sand washing element of the M2500 E3™ where a single grade of washed concrete sand was produced and discharged via the integrated stockpile conveyors. This set up gives Camargo Correa the additional option of being able to deliver

directly to the crusher if any of the dredged material is clean enough not to require washing in the M2500 E3™.

The Process

- Excavated material is fed into the M2500 E3™ via a L35 feed hopper which then feeds the appropriate sized material, in this case 0-150mm, through to the feed conveyor.
- The feed conveyor delivers the material to the ProGrade™ Rinsing Screen, which by the use of individually controlled rotating spray bars separates aggregate products into an oversize (+150mm) and 5-150mm product which is then delivered to the separate mobile dry sizing screen.
- The -5mm material is sent to the Evowash sand washing plant (integrated on the M2500 E3™ chassis) and washed concrete sand is produced with effective and efficient removal of the -63micron material.
- The EvoWash™ Sand Plant incorporates a Hydrocyclone and Dewatering Screen which effectively separates silts and clays from the final washed sand product. This not only results in a product with very low moisture content but a higher grade product to alternative inefficient sand washing systems.
- After the M2500 E3™ the waste water from the Hydrocyclone is then sent to an Aquacycle Thickener. This allows for recycling of up to 90% of the water used in the washing process and also minimises the space required on site to accommodate settling ponds.
- For Camargo Corrêa a static screen was installed over the main water tank, as with the main feed being drawn from the riverbed foreign matter such as roots and organic material which may be present could be efficiently removed.
- The overall feed capacity of the M2500 E3™ is 250 tonnes per hour (tph).
- The overall output of the M2500 E3™ is 200 tph (140tph of 5-150mm aggregate and 60tph of washed sand).
- On the Camargo Corrêa installation the M2500 E3™ was elevated to increase the overall capacity of each stockpile