



## **Resource Materials invests in CDE technology for new wash plant** *450tph plant commissioned near Jarrell, TX*

Texas-based Resource Materials, a supplier of sand and aggregates to the local construction industry, has invested in a new wash plant for its quarry in Williamson County, TX.

In response to increasing demand for high quality construction materials in the local markets and big Texas cities, the company has partnered with industry experts CDE to design and engineer a solution to produce concrete rock and concrete sand from the limestone quarry.

It was unveiled recently as industry representatives and materials processors from across North America came together for CDE's first Open House event in the US for over two years.

CDE's Business Development Director for the Americas, Darren Eastwood, welcomed the return to face-to-face interaction.

"It was hugely encouraging to see the level of interest in this new plant and to be able to come together again as an industry to recognize the continued efforts of our sand and aggregates producers who have kept up production in challenging circumstances while also renewing their operations and investing in new technology."

### **Unlocking potential with CDE**

Resource Materials was established in 2019 to build the new wash plant in an existing limestone quarry near Jarrell, TX.

To unlock the potential of its new greenfield site, Resource Materials recognized the need to commission state-of-the-art technology to support its commercial aims and maximize the quality and quantity of the available sand and aggregate resources.

CDE was selected as the partner of choice for the project because of its ability to configure and optimize a sustainable solution aligned to the specific needs of Resource Materials, explains Kevin Collier, Co-Owner of Resource Materials.

"We have longstanding and very positive working relationship with the team at CDE, whose technology and proactive approach to ensuring our quarries are constantly running material at optimum efficiency has always given confidence in our investments."

"The technology itself is proven, the results have been demonstrated, and our customers expect us to maintain those high standards already set. CDE's wet processing technology is fundamental to our existing operations and we recognize this partnership as an essential component in our future success, too."

### **Co-creating the solution**

From the preliminary stages of the project, CDE worked closely with Resource Materials using its unique co-creation approach to better understand what the business wanted to achieve from its plant in order to inform and engineer a turnkey solution to meet production requirements and extract maximum value from its quarry operations.

CDE Business Development Manager Tom Wick explains: "Every solution we deliver is optimized and configured to the specific needs of the customer, taking into consideration the characteristics of the site, raw feed materials, the rate of feed to meet production objectives, specification of output materials, access to water supplies and water management, and more."

Input from and collaboration with the customer is crucial to enable us to deliver a solution that not only meets the performance requirements but exceeds expectation.”

Resource Materials Co-Owner Kevin Collier adds: “It’s an engaging and reassuring process, one that demonstrates that CDE has our best interests in mind and that the final solution is engineered to address our specific needs.”

After consultation with the team at Resource Materials, CDE proposed a tailored wet processing solution to suit the site’s specific output requirements and efficiently process virgin quarried limestone feed material to produce high quality washed construction sand and aggregates.

### **Proven solutions**

The resulting 450tph plant incorporates CDE’s [M4500](#) and [M2500](#) modular wash plants, dual RotoMax logwashers, [AggMax](#) modular logwasher, and closed-circuit water management system incorporating the [AquaCycle](#), [FlocStation](#), and [AquaStore](#).

The solution, Wick explains, has been engineered to maximize production volumes for Resource Materials while minimizing operational costs.

“We pride ourselves on engineering solutions that enable fast return on investment for our customers, achieved through advanced, modular processing technologies that integrate seamlessly to ensure maximum transfer point efficiency and underscored by industry-leading water management.”

Resource Materials Co-Owner Kevin Collier comments: “We were extremely encouraged by CDE’s expertise and understanding of our requirements as well as their ability to take those insights and work them into a practical solution that ensures our plant performs consistently and at maximum productivity.”

With a capacity of 450 tons per hour, the M4500 portable sand washing plant – part of CDE’s M-Series which also includes the M2500 unit – is producing four aggregate products to specification and incorporates CDE’s EvoWash sand washing technology.

CDE’s signature EvoWash technology – a compact, modular sand washing system – integrates a high frequency dewatering screen, sump and hydrocyclones to provide unrivalled control of silt cut points and to eliminate the loss of quality fines with significant commercial value.

It incorporates CDE’s patented Infinity Screen technology for optimal dewatering results which enables customers to produce a range of high quality sands that are market-ready straight from the belt.

CDE’s AggMax technology is engineered to operate in the toughest of conditions to maximise product yield from the most abrasive of feedstocks. Combining feeding, scrubbing, screening, and sizing on one chassis, the AggMax is suitable for a variety of material streams and across various industries. The unique spiral alignment of its paddles reduces the shock of intermittent loads on the gearbox, motor and bearings. This design ensures consistent material loading and the unique paddle shape ensures maximum attrition with even the heaviest clay-bound feed material.

Incorporating CDE’s pioneering Infinity Screen™ technology, it offers greater screening capability and reduces power consumption.



Seeking an efficient solution that would support Resource Materials to minimize its environmental footprint, CDE proposed its AquaCycle to reduce the water burden at the site and offer near-total independence from fresh water supplies. An alternative to water extraction and the costly process of pumping water to the plant, the AquaCycle is a highly efficient water management system that minimizes water consumption by ensuring 90% of process water is recycled for immediate recirculation.

After feed material has been washed and classified, waste is sent to the AquaCycle thickener tank where a small amount of polyelectrolyte flocculant is added to the water via the FlocStation which forces fine particles to settle on the bottom of the thickener tank. The clean water on the top overflows the weir and is stored in the on-site AquaStore before being recirculated around the plant. The result is a highly efficient water recycling system that requires only a 10% supply of top-up water reducing the volume of fresh water required to feed the plant.

## **Results**

With the support of CDE wet processing technology, Resource Materials is now producing four products including C33 manufactured sand, two concrete rocks and an oversize.

The engineered-to-order wet processing solution is processing raw limestone feed material at a rate of 450tph to produce four products including 1¼+ oversize aggregates; 1¼ - #4 washed #57 stone, a versatile product used widely in the construction industry in applications such as concrete; 4 - 8 mesh grit; and reliable and consistent C33 concrete sand.

Resource Materials Co-Owner Kevin Collier says the partnership with CDE which includes a plant performance guarantee is enabling the company to fulfil the growing demand for quality construction materials in Texas markets.

“With CDE’s assistance we’re achieving maximum market value for our available resources, boosting the quality and quantity of our in-spec sand and aggregates in equal measure. We’re now equipped with the technology and processing capacity to respond to calls for a consistent and reliable supplier of construction materials in the marketplace.”

For more information about CDE and its wet processing solutions, visit [CDEUSA.com](https://www.cdeusa.com).