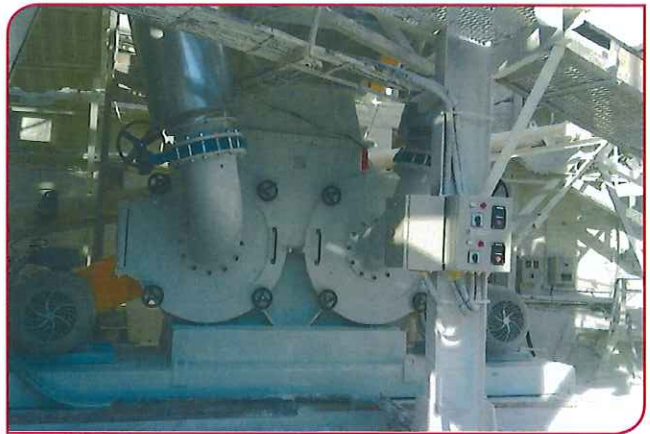




Right: The SIC HPK lime kiln installed for Carrieres et Chaux du Mali in Mali.



Far right: Micronising mill installed by SIC for Zao 'Izvestnyac' in Russia.



Società Impianti Calce (SIC)

2000 years since the Roman architect and encyclopedist Vitruvius first laid down the implementation criteria for lime production, Società Impianti Calce (SIC) continues the trend of Italian technology in lime plant manufacturing. Here it outlines some recently completed projects, outlining its problem solving approach and bespoke solutions tailored to different clients.

Right: The Santa Rosa Lime CBK kiln has recently undergone a wholesale renovation by SIC.



Completed projects

Mali: SIC recently completed the testing and commissioning of a single shaft HPK lime kiln for Carrieres et Chaux du Mali. Located in Sema Falcadiè, near Bamako, the kiln uses heavy fuel oil to produce 100t/day of quicklime, primarily for the gold mines in the area.

Russia: In November 2016 SIC completed the commissioning and running test of a micronisation plant in Karachay, Russia for Zao 'Izvestnyac.' The plant receives limestone of diameter <10mm and produces 100% micronised calcium carbonate at <160µm. The heart of the system consists of an S100 micronising mill.

While this may sound small, the particle size is not particularly low for this type of mill, which is capable of reducing limestone to 10µm. However, the most challenging part of the client's request was its need to have absolutely zero residual over 160µm. This means that, in fact the system is set to produce particulates of 98µm.

After the commissioning phase of the mill and the contractual running tests, it was possible to test the S100 mill and produce different particle sizes. This demonstrated the ease of setting up the S100.

Trinidad & Tobago: A plant installed by SIC in 2010 for the company Santa Rosa Lime Trinidad & Tobago, comprising a 50t/day CBK kiln with a methane combustion system and a 5t/hr hydrating plant, was stopped for a year for due to corporate reasons. SIC has now completed a complete revamp and update in collaboration with US-based KNS. It was recommissioned in December 2016 and has since re-entered production.

Projects in advanced testing

Vietnam: In 2014 a contract was signed between SIC and Huong Hai Group in Ha Long City for the largest lime plant ever to be built in Vietnam at that time. It comprised two DSS Double shaft square kilns, each



Right and below: The Huong Hai Group lime plant in Vietnam has undergone commissioning.



of a capacity of 300t/day of quicklime that were to be fed with limestone of 50-100mm. A petcoke combustion system and two hydration lines of 10t/hr were also supplied.

The first kiln and the two hydration lines have already been tested after reaching the contractual parameters. The second kiln has already undergone commissioning and is waiting for the 'green light' from the customer prior to entering production.

Projects under construction

Russia: A 400t/day DSS kiln with a double round shaft and a limestone feed size of 30-60mm is at the end of the assembly phase for Tetranox, located in Rostov on Don, Russia. SIC engineers will begin soon the commissioning and the running of the plant is expected by the first semester of 2017

Tanzania: In January 2017 SIC provided a new HPS 5 model air separator to an ARM Cement plant, located in Tanga, Tanzania. This is the third time that SIC has been selected to provide equipment by the Kenya-

based cement manufacturer. **Ukraine:** In January 2017, SIC completed the delivery of equipment for the realisation of a 5t/hr hydration system for the steelmaker Metinvest Ukraina in Mariupol.

The plant, built by the Italian company Termokimik, will produce hydrated lime used for the neutralisation of gaseous emissions. The plant engineering required special precautions because the temperature of the project ranges from -26°C to +38°C. Assembly has already begun on site.

Tunisia: All of the equipment related to a hydration plant project have recently been delivered to Societe Chaux el Hamma, which is currently assembling its plant in Gabes, Tunisia.

The plant was designed to allow the production not only of the standard hydrated lime but also of hydrated limes with a particle sizes of 15µm for special uses.

New projects

India: In March 2016 SIC was awarded a tender for for the construction of a DSS (Double Round Shaft) kiln with production of 450t/day of quicklime for the Steel Authority of India. The new kiln will be part of a steel factory in Bokaro.

The provision, comprising the kiln, grinding and screening, sees SIC committed, in consortium with SIC India organisation, to the turnkey construction of the entire project, starting from the creation of concrete works to the full commissioning of the plant.

The kiln will be fed with limestone of 25-50mm in diameter and will be able to use different fuels, either separately or individually.

As part of the project, some pre-existing buildings have already been demolished ahead of construction. Excavation and construction of the concrete works of the new plant has also begun. 