

One Stop Shop

Quarrying is just one of this month's featured industries, but illustrates the diversity of applications involved. At its very simplest quarrying amounts to cutting material out of the landscape, reducing it to useful sized particles, sorting and segregating and presenting the finished materials for transport and further use in other products. Each of the processes within this chain of events demands skilled and efficient planning as well as competent integration into the whole production scheme. For example, each activity demands effective dust control, with possible options from localised fogging to fully filtered exhaust ventilation.

Once the initial cutting, or blasting has been accomplished, the material may be crushed roughly, then further reduced in size, typically by means of some kind of impact crusher. Material is then conveyed, mechanically or pneumatically to screens, frequently incorporating washers, to segregate the material by grain size. In many cases the final screened output will offer material from about 20mm down to perhaps 0.5mm. Water infeed will be metered to provide a known final water content.

On-line weighing systems, generally incorporated into the conveyors, will compute mass flow rates, with accurate monitoring of quality and production levels. Depending upon the scale of operation and the material characteristics, the most appropriate outloading system will be determined. This could be directly to bulk road or rail vehicles from holding silos via weigh hoppers and aspirated delivery chutes or spouts to give dust free loading. Alternatively the material may be delivered to bagging stations for small (25kg) bags or larger FIBCs. Small bags will normally be stitched, stacked automatically on pallets and wrapped for safe transport.

So, quarrying, like many other bulk materials based industries involves many interdependent processes, each acting as "customer" from the previous process and "supplier" to the next, with all issues relating to quality and flow invoked by their unique stage in the process. For a new plant or an existing site undergoing refurbishment or expansion, this requires thoughtful coordination by all the supply chain, guided by an expert system designer, with each supplier understanding their part, or better still possessing a good grasp of the whole production system. Confidence born out of experience is the key to success, avoiding all possible "weak links" that could be prejudicial to long term continuity and efficiency.

So, what have all of these requirements in common? Well, there will be an expert SHAPA member company available to supply at every stage of the principal's demands. Furthermore, for more than three decades SHAPA has been dedicated to supporting the solids handling and processing industries with up to date technical, legislative and commercial information to help them to offer consistent effective quality, for their own satisfaction and for industry at large. Check out this "one stop shop" by visiting www.shapa.co.uk or email info@shapa.co.uk.