

Steady supply of explosives provides security for mining industry

With increasing competition and operating costs, coupled with declining commodity prices, mines cannot afford any interruptions to production over a lack of supply.

This is according to Denvor Govender, Global Supply Chain Manager at AEL Mining Services, who says that a secure and steady supply of explosives in particular is of great importance to the industry.

“Mining houses are increasingly seeing the value in identifying strategic partners who possess the necessary market intelligence and footprint in order to deliver on the fast and reliable supply of explosives and related services,” Govender says.

Govender adds that the growing use of emulsions are one of the explosives options which is leading the way in keeping mining houses supplied with the right products at the right times. He says AEL’s capabilities provide an end-to-end solution for the supply of emulsion, from manufacture to transport and from storage to on-site delivery.

Emulsions can be manufactured in 24 of AEL’s 25 plants and even on-site through mobile manufacturing units (MMUs) according to the mine’s unique specifications, including the type of rock being blasted and the temperatures they need to be able to withstand.

Govender says AEL is also able to safely transport emulsions across the SADC region because these products are stable and not explosive until it is sensitised. Transportation efficiency is increased by reducing the regulatory conditions which accompany authorising the movement of traditional explosives.

However, transportation would mean little to mines if they had nowhere to store the emulsion which is why AEL has individual silo capacities of up to 240 tonnes in strategic locations in mining areas to help keep supply channels open to customer operations.

Meanwhile, AEL’s MMUs are providing the best method for steady supply when mines opt for on-site emulsion blending.

In the past, mine operators would have to wait for an MMU to refill anywhere between 40 minutes to 2 hours while AEL has developed a rapid-reloading method which reduces this time to between 15 and 30 minutes.

Underground mines then have a further option of emulsion delivery through Vertical Drop infrastructure in which a series of tubes transport these products safely to an access point adjacent to the workings. Portable PCU pumps then allow the emulsions to be sensitised on-site underground. This significantly reduces transport times as the emulsions no longer need to be transported through operations and no staff need to be evacuated to do so.

As both new and established mining houses increasingly explore frontier markets in a bid to develop profitable operations, innovations are required in the supply of explosives in what can often be challenging environments to deliver to.

For instance, Africa saw a 75% increase in its global share of deals by value between 2011 and 2012, according to [research](#) by EY's Global Mining & Metals Center and while this shift is significant to the African market, challenges including how to transport such products to areas of high temperature Govender recommends the use of dry gels in such areas because not only can they be transported over long distances; they also retain their rigidity in the aforementioned weather conditions.

"AEL is constantly innovating products and delivery systems which will meet the unique needs of any mining operation around the globe. We will always respond to demand by increasing storage capacity, transport distances and efficient-delivery processes to provide security of supply which can keep mining operations running smoothly and effectively," Govender concludes.