

Case Study – Zinkgruvan Mining AB, Sweden

Background

Zinkgruvan has been in continuous production since 1857. The primary metal produced is zinc, with lead and silver as by-products. Zinkgruvan is one of the largest underground zinc mines in Sweden and is ranked in the lowest cash cost quartile among global zinc mines.

The operation consists of an underground mine and processing facility with associated infrastructure and a production capacity of 900,000 tonnes of ore throughput. The mine has three shafts with current mining focused on the Burkland and Nygruvan ore bodies. One shaft is used for ore and waste handling; the other two are used for transportation of personnel and for emergency egress. The current flowsheet consists of crushing and autogenous grinding, bulk flotation, concentrate regrind, selective flotation separation of lead concentrates from zinc concentrates, all followed by thickening and filtration of the individual lead and zinc concentrates.

Minecom Solutions

Zinkgruvan is supported by a VHF Leaky Feeder System. The VHF MCA1000 series Leaky Feeder Head End unit is the nucleus, or core, of the Minecom Leaky Feeder system. Its purpose is to combine the RF outputs of up to 64 low powered Transmitters and the RF inputs of up to 64 VHF Receivers and produce up to 16 PAL video channels with a single 50 ohm output, 19 inch 3RU rack unit, providing the necessary interface between the base radios, video demodulators/ monitors etc. and the leaky feeder cable.

The standard MCA1000 Head End is capable of providing up to 8 full duplex channels. Additional channel expansion units can be used to increase the number of useable channels to 16, 24, 32 or 64 respectively.

The Zinkgruvan mine is continuously growing and has to date (September 2010) over 100 km of Minecom Leaky Feeder running through the mine.

Zinkgruvan has also relied on Minecom to solve the communications connection between the underground Leaky Feeder System and the aboveground communications system. Minecom has installed a 4 channel Linked Repeater System that seamlessly connects the aboveground and underground communications.