



Sideflex beating the boulders

Sideflex for advanced asset protection

Many so-called innovations are simply tweaks of existing products - making them a little more durable, a little easier to use, slightly quicker to apply, maybe more economical but they are hardly revolutionary. A true innovation is something radical that solves an existing problem to the ultimate benefit of the user, either saving time or money or, in the case of industry, improving productivity.

Just occasionally, we are presented with an entirely new product – something that has never been done before - which is set to fulfil all these criteria.

In mining and some earthmoving applications, the dump trucks used to carry either waste, ore or coal from the working face to the processing plant, rely on large expensive earthmover tyres to carry out their tasks. Tyres are the single most important asset. Depending on site conditions, these tyres can be subject to poor traction, abrasive attrition and sidewall damage. Poor traction due to soft, clayey conditions or iced up haul roads is a safety issue. A skidding, 400t truck is a dangerous thing.

Tyre abrasion is an asset issue. Abrasion can rapidly destroy tyres, leading to premature and costly replacement. Nowadays truck operators overcome both these problems by adopting the same remedies used to protect the tyres of wheeled loading shovels, bulldozers and graders. Fitting a suitably-patterned, durable set of tyre protection or traction chains to the truck's drive wheels provides extra grip and absorbs the abrasion, doubling and trebling tyre life.

For trucks, there still remains the risk of sidewall damage from sharp flints and shale-like debris and, once damaged in this way, the weakened tyre becomes a write-off with no possibility of extended life as a remould.

Although haul roads are regularly cleared of spills and rock falls, it only takes one stray flint to instantly destroy a tyre and disable a truck with the consequent interruption to

productivity.

With loaders, dozers and graders tyres it is accepted practice to protect tyres from sidewall damage with an impenetrable, tight-meshed chain but, while, in extreme conditions, TPCs have been tried with dump trucks, the long travelling distances involved make this solution impracticable and short-lived.

Some 70 years ago, responding to the needs of the newly-arrived, pneumatic-tyred mining loaders, Rud-Erlau devised and developed the tyre protection chain (TPC) going on to hold over 65% of the world market for tyre protection and traction chains.

Due to feedback from its TPC engineers, Rud-Erlau was well-aware of the vulnerability of dump truck tyres and asked its R&D team to tackle the problem. With over 130 years' experience in the development and manufacture of chain components, the first instinct was to create a device based on steel-alloy elements. However, success only came when the team turned its attention to materials used in other industries and developed Sideflex – a truly innovative addition to the company's range of asset protection products.

Simplicity is the key word for Sideflex: a sturdy set of replacement wheel nuts and extensions support a simple steel ring to which is attached a fanned array of overlapping platelets. These platelets shield the entire sidewall of the truck tyre deflecting rock fragments harmlessly away.

While the mounting components are made of steel, the all-important Sideflex shield is manufactured from a sophisticated engineering polymer which has found many applications in the automotive and other industries. This robust, yet light weight material, which is used to protect automobiles, has a unique memory capability that enables the platelets to flex and deform upon impact and then return to their original shape without any loss of integrity.

World's biggest mobile crushing plant sold by Metso

Metso is to supply world's biggest fully mobile, track-mounted crushing plant to Altay Polimetally LLP copper mine in Kazakhstan. The contract includes large mobile feeding and conveying systems to move the crushed copper ore for further processing, and installation supervision and training. The complete value of the order exceeds €11M.

The giant mobile jaw plant will be used at primary crushing stage at Altay Polimetally's new open pit mine, situated in the Karagandy region. Metso's mobile crushing equipment to Kazakhstan will be delivered within the last quarter of 2013.

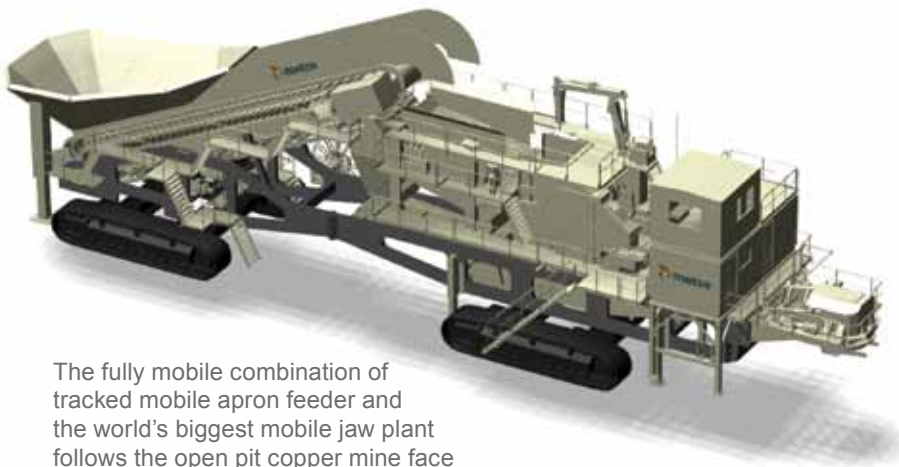
The almost 400 ton weighing Lokotrack LT200, which is the biggest ever built, processes copper ore with a nominal capacity of 2,500 tons per hour. The complete mobile system weighs over 800 tons, but can be moved easily along the mine face. To withstand the harsh climate conditions during the winter, the whole mobile system

is electric driven. The operational temperatures at the mine site vary from +35°C to -35°C.

At the new open pit mine, the blasted copper ore is fed using Metso's MAF210 mobile apron feeder to Lokotrack LT200 jaw plant, and then conveyed using Nordberg LL16 mobile conveying system, and track-mounted stacker to the mine's conveyor network.

The loading height of the tracked mobile apron feeder is 6m, and it has a feed hopper volume of 24m³. The LT200 jaw plant, equipped with Metso's biggest C200 jaw crusher, can crush ore feed lumps up to 1.2m in size. The wheel-mounted LL16 mobile conveyor has two conveyor elements, each 42m long. The track-mounted stacker has a discharge height between 3-10m

Altay Polimetally LLP, based in Almaty, Kazakhstan, will extract at the new mine copper ore including gold. The planned ore extraction will be 3M tons per year, and including host rock 10M tons.



The fully mobile combination of tracked mobile apron feeder and the world's biggest mobile jaw plant follows the open pit copper mine face during ore extracting.

Zinc production in Europe

A new report by market analysts GBI Research, "zinc mining market in Europe to 2020", shows that European zinc mine production stood at an estimated 0.915 Mt during 2011. Ireland was the major contributor with a share of 38.4%, while Russia, Sweden and Poland contributed 29.9%, 21.2% and 10.6% respectively. European zinc metal consumption stood at an estimated 360.7 Mt in 2011 with Russia accounting for over 70% of this.

Russia and Iran have formed an agreement to develop the Mehdiabad zinc and lead deposit in the Iranian province of Yazd where the total ore reserves are estimated to be around 394 Mt with an average zinc grade of 4.2%. The project will be managed and operated by Russia's Rostekhnologii Corp and Iranian Bank Saderat Iran, with an estimated investment of around \$1.2 billion.

Other planned zinc projects in Europe include the Pallas Green project in Ireland, estimated to hold 1,945.1 Mt of reserves, and the Ozernoe zinc project located in the Russian province of Buryatia, containing 157 Mt of zinc ore. Further exploration potential is evident in Poland, as the area surrounding Krakow is believed to possess huge unexploited resources with high-grade zinc content.

Siberian Anthracite reaches milestone

Siberian Anthracite, one of the world's largest producers of ultra high grade (UHG) anthracite by carrying out open-pit mining at deposits in the Gorlovsky coal basin in the Novosibirsk region of western Siberia, has increased its coal mined by 36% to 2 Mt since the beginning of the year.



Open Pit Mining



Underground Mining



Slag / Recycling



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