

Making African Mining Safer

A first Semi-Automation Guidance System installed in West Africa. African miners sit in a cabin away from danger zone operating machines on remote video screens.

African Underground Mining Services (AUMS) recently purchased for their mining contracts in West Africa the latest version of the **Control Master**[®] suite of Guidance technology used with Teleremote Control operation of two underground trackless loaders. In both of their mining operations, AUMS were looking for increased productivity, safety and efficiency, using proven world-class technology.

The Original Equipment Manufacturers of **Control Master**[®], Australian company Remote Control Technologies (Pty) Ltd (RCT), supplied and commissioned the first of the two loaders in Mali, West Africa, at the Gara Decline of the Randgold Resources-owned Loulo Gold Mine in July 2012.

This particular project was for the successful installation of a **Control Master**[®] Teleremote and Guidance system to a Caterpillar R1700G SBR Underground Loader, and the installation and commissioning of **Control Master**[®] components to a Telecabin built by AUMS.

The Telecabin enables safe and comfortable remote control operation of the loader from a safe distance, using a system of cameras mounted on the loader. The camera's send images of the loading operation to the operator stationed inside the Telecabin. The operator controls the loader from a fully equipped Teleremote chair.

The second **Control Master**[®] Guidance and Teleremote system supplied to AUMS was commissioned in August 2012 at the Kinross-owned Chirano mining operation in Ghana for their Paobase underground mine.

This project was for the supply and commissioning of the **Control Master**[®] Teleremote and Guidance system onto a Caterpillar R2900G Underground Loader, operated from a mobile **Control Master**[®] Modular Teleremote Control Platform, also supplied by RCT. The mobile platform can be fitted onto a

personnel carrier, which allows for increased mobility of the Teleremote mining operations.

This option allows for the operation of the loader on remote control from a personnel carrier parked in a cuddy, safely away from the danger of the loader in the open stope. The operator controls the loader with vision displayed on the video monitors.

Guidance (Semi-Automation)

Machine automation in the form of Guidance is added to the Teleremote control operation of mobile trackless machines. The Guidance system employs the use of lasers to keep the machine off the walls and major obstacles, whilst keeping the loader in the optimal tramming path or middle of the drive. The numerous advantages of the Guidance component of the **Control Master®** suite of remote control systems include:

- Reduces machine damage, prolonging the life of the machine
- Increased productivity, more buckets each shift; faster tramming
- Real Time responsive,
- Wall hug feature,
- Allows the machine to travel at higher gears,
- Allows the machine to travel at the correct speed to suit the conditions of the mine
- Reduces operator fatigue, and improves the operator's working conditions.

RCT have delivered this world class technology effectively, with support in the form of on-going training and service agreements - which will ensure optimum return on investment for these African mines, and for AUMS.

Mines in Mamba, South Africa, Zambia, Tanzania, Botswana, Egypt, and Saudi Arabia also employ **Control Master®** Remote and Teleremote Systems.

All RCT African customers are supported by a business team based in Southern Africa.