

TRAFFIC CONTROL AND AUTOMATIC OPERATION OF TRANSPORT AND LOAD/UNLOAD SYSTEM OF TRAINS

Rafael Guzmán, Norma Vargas

Codelco Chile – División El Teniente, CHILE

ABSTRACT

Codelco Chile, Division El Teniente, from the decade of the 90 incorporating in his productive processes has been systematically, the automation in his main lines of mining equipment, fundamentally like a tool to increase the safety of his exploitations, and of the hand, the increase of productivity and yield of his assets. In this it lines there are several examples, and in particular the automation of the railroad of Mine Esmeralda and the level of transport of Teniente8 demonstrate this way it.

The system in Esmeralda Mine, have been utilizing in an industrial application since 1999. Significant productivity benefits have been achieved with major safety improvements. Four copper ore trains run simultaneously 24 hours a day and seven days a week hauling more than 40.000 tones a day. In the another level, a 20 km line with four stations for unload, 30 points for load, the system controls the hauling of eight copper ore trains simultaneously, 22 hours a day, seven days a week whit approximately 130.000 tones every day.